EXHIBIT A

IN THE UNITED STATES DISTRICT COURT

FOR THE SOUTHERN DISTRICT OF NEW YORK

In re Google Advertising Antitrust Litigation	Civil Action No. 21-MD-3010 (PKC)

[PROPOSED] CONSOLIDATED ADVERTISER CLASS ACTION COMPLAINT

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Plaintiffs, on behalf of themselves and all others similarly situated, bring this consolidated advertiser class action complaint for equitable relief and treble damages under the Sherman Antitrust Act, 15 U.S.C. §§ 1 and 2, and the Unfair Competition Law, Cal. Bus. & Prof. Code § 17200 *et seq*.

I. NATURE OF THE ACTION

1. A generation after Google became the dominant internet search engine, it now dominates the services for placing digital display ads across the web and on mobile device applications. The ads people see on the web and in apps are almost invariably placed through Google. The markets for these display ads are complex and rely on instantaneous auctions through which publishers and advertisers trade display inventory through brokers on electronic exchanges. Google controls the "ad tech stack" made up of these intermediary services between advertisers, who pay to place these advertisements, and publishers paid to publish the ads on their websites. Google monopolized the means to buy and sell display-ad placements, including through secret rigging of ad auctions and anticompetitive agreements imposed on publishers.

2. Nearly every online advertiser now relies on Google to broker placements of banner, sidebar, pop-up, in-app, and video ads to market their goods and services to consumers. Likewise, nearly all of today's online publishers (be they large or small) and mobile application developers depend on one company—Google—as their intermediary to sell their display-ad space in ad exchanges, the centralized electronic trading venues where display ads are bought and sold. In addition to serving both the buyers and the sellers of digital display ads, Google also operates the largest exchange, AdX, which processes about 11 billion ad spaces every day. A senior Google employee noted that "[t]he analogy would be if Goldman or Citibank owned the NYSE"—and also held monopoly power in the markets in which buyers place bids, sellers offer certain prices, and the auctions themselves occur. If this were a live, in-person auction, Google

would be the auctioneer as well as a bidder; and it would have designed the process so that the other bidders could not hear the live bids, but instead would need to submit advance bids based on guesses about what the other bids were going to be. Exacerbating these conflicts, Google is also a seller of a portion of the inventory up for bid.

3. When a user visits a commercial web page, he or she typically sees display ads. Every time this happens, a unique "impression" has been generated for each ad space available. In the fraction of a second it takes for the page to load, the impression is bought, sold, and filled with an advertisement to display to the user. Ad impressions that display inside a user's mobile phone applications (in-app ads) work much the same way.

4. Ad impressions are functionally distinct from traditional ads. An ad impression is not just space on a page; it is an opportunity to sell an advertisement "targeted" to a specific user or type of user. Unlike an ad in traditional print media, a single slot for a display ad can be sold to many different advertisers in millions of separate transactions at different prices.

5. Publishers use a unique type of product called an "ad server." When an impression becomes available, the ad server collects and conveys information about the impression (e.g., dimensions, placement, user information), and then automates split-second decisions about which ad to display. Advertisers generate substantial demand for purchasing display-ad inventory. Advertisers use specialized ad-buying tools to optimize and carry out their purchases of ad impressions. These tools let advertisers set various decision-engine parameters to optimize their unique ad campaigns and automated purchasing decisions (such as details about the types of users to target, the bids to submit for various types of ad inventory, etc.). Using these parameters, the ad-buying tool will then automatically place bids to purchase impressions on the advertiser's behalf. Advertisers use two distinct types of buying tools: large advertisers

use complex and customizable tools to buy large volumes of ad space, and small advertisers use basic buying tools to make smaller purchases of ad space. Publishers using ad servers and advertisers using ad-buying tools connect with each other in the ad exchange—a real-time auction marketplace—billions of times every day.

6. Google exercises substantial power in several display advertising markets. As relevant to this Complaint, Google holds monopoly power in the market for ad exchanges (dominated by its AdX exchange) and in the market for ad-buying tools for small advertisers (dominated by Google Ads, formerly known as AdWords), and has market power in the market for ad-buying tools for large advertisers (dominated by DV360). In each of these markets Google abused its power to suppress competition, causing advertisers to pay higher prices to place display ads, as set forth in greater detail below.

7. By way of summary, Google's display advertising monopolies originated with its 2008 acquisition of DoubleClick, which operated the leading ad server, DoubleClick for Publishers (DFP). Google effectively turned DFP—previously a competitive clearinghouse of ad-impression inventory—into a chokepoint through which it could exclusively control access to the demand produced by hundreds of thousands of advertisers. Google then used DFP to foreclose competition from rival exchanges and buying tools. Google implemented a program called Dynamic Allocation, which gave AdX a right of first refusal on auction transactions. Google then refined that program, devising "Enhanced Dynamic Allocation," which gave Google access to a new pool of premium ad inventory and walled off rival buyers from that pool.

8. Just a few years ago, online publishers in the United States were selling large volumes of placements directly to advertisers and through multiple exchanges. Direct deals and transactions on competitive exchanges cost less to process than Google charged for trades on its

exchange. Reacting to these competitive threats, Google coerced publishers to give it advance looks at the ad space they offer through other exchanges. Google then intercepts the most valuable opportunities, trades them itself at higher rates, and passes less valuable space to advertisers bidding elsewhere. Google also limits the number of other exchanges that can receive publishers' bid requests, limits publishers' ability to set different prices on different exchanges, and interferes with the performance of those exchanges—practices that allow it to sell more impressions at supra-competitive premiums. Further, Google imposes a 5 to 10 percent fee for transactions that clear on *other* exchanges, simultaneously profiting on trades outside Google's system and handicapping companies that clear those trades.

9. Google also entered into a "Network Bidding Agreement" (NBA) with Meta that impaired competitive bidding and transactions on Google's "Final Clearinghouse Auctions" for web display and in-app advertisements by giving Meta special advantages and proprietary information no other bidder enjoyed. Google distorted competition in these auctions, placing all non-Meta bidders at a competitive disadvantage by giving Meta information on bidder identities to improve Meta's "match rates," information that enabled Facebook to better determine whether ads would be seen by humans instead of bots, and a timeout period during which Meta can evaluate bid requests and place a bid that is almost twice as long as the period for all other bidders.

10. Moreover, Google secretly manipulated auctions, coerced publishers and advertisers to transact in AdX and coerced advertisers to exclusively use Google's buying tools. Google manipulates auctions with its secret "Bernanke" programs and technology to increase its take rate and then uses the resulting pool of ill-gotten gains to manipulate subsequent auctions, stifling competition in the exchange market and in the small-advertiser buying tools market.

Google's "Dynamic Revenue Share" program rigged auctions such that AdX would win impressions it otherwise would have lost to rivals, thereby enabling Google to avoid price competition without forfeiting market share. Google imposes "Unified Pricing Rules" on publishers through coercive agreements that prevent them from setting lower threshold bids on competing exchanges or giving different advertisers lower prices than publishers give Google and ad buyers on its properties. And Google's "Reserve Price Optimization" program secretly overrode publishers' exchange floor prices, increasing the amount advertisers paid for impressions on AdX.

11. Plaintiffs in this action placed online and in-app display and search advertisements using Google's services. They paid anticompetitive overcharges due to Google's antitrust violations and, on behalf of a class of similarly situated advertisers, seek all appropriate relief.

II. JURISDICTION AND VENUE

12. This Court has original jurisdiction over Plaintiffs' federal antitrust claims under the Clayton Act, 15 U.S.C. § 15. The Court also has diversity jurisdiction over this action under the Class Action Fairness Act of 2005, 28 U.S.C. § 1332(d), because at least one class member is of diverse citizenship from Defendants, there are more than 100 class members nationally, and the aggregate amount in controversy exceeds $5,000,000.

13. Venue is properly laid in this forum under 28 U.S.C. § 1407 based on the Judicial Panel on Multidistrict Litigation's decision of August 10, 2021, reported at 555 F. Supp. 3d 1372.

III. PARTIES

A. Plaintiffs

1. Hanson Law Office

14. Plaintiff, Christopher Hanson d/b/a Hanson Law Office, successor-in-interest to Hanson Law Firm, PC, is based in Napa, California. In connection with its dissolution, Hanson Law Firm assigned its causes of action in this litigation to Christopher Hanson. During the class period, Hanson Law Office paid Google directly to broker the placement of its display advertisements on third-party websites.

15. Hanson Law Office paid Google $487.78 between June 2016 and September 6, 2016, for these intermediation services.

16. From June 1 to September 6, 2016, Hanson Law Office's display advertising for its legal services appeared on 992 different websites a total of 689,876 different times. These websites ranged from news organizations that included the *Los Angeles Times*, *Daily Beat*, and *Vanity Fair*, to dating websites such as Match.com, as well as information sites like Wikihow.com.

17. During the class period, Hanson Law Office also paid Google for AdWords advertising connected to various searches performed using Google's internet search engine.

18. Hanson Law Office placed display ads as well as search ads to expand the reach of its online advertising to include potential clients who may not have specifically searched the web for relevant topics or legal services, and to optimize its re-marketing to users who had already visited its website or clicked on its ad and to those who carried a similar "cookie" profile.

19. Hanson Law Office sustained antitrust injury by paying supra-competitive prices to Google to broker the placement of its display advertisements on third-party websites. These

anticompetitive overcharges directly and proximately resulted from Google's monopolization of the relevant markets and anticompetitive conduct as set forth herein.

2. Vitor Lindo

20. Plaintiff, Vitor Lindo, is a citizen and resident of Georgia and a photographer based in Pembroke, Georgia. During the class period, Mr. Lindo paid Google directly to broker the placement of his display advertisements on third-party websites, including sites associated with wedding services.

21. Mr. Lindo paid Google $21,971.45 between 2016 and 2019 for these intermediation services.

22. During the class period, Mr. Lindo also paid Google for AdWords advertising connected to various searches performed using Google's internet search engine.

23. Mr. Lindo placed display ads as well as search ads to expand the reach of his online advertising to include consumers who may not have specifically searched the web for topics or services relating to wedding photography, and to optimize re-marketing to users who had already visited his website or clicked on its ad and to those who carried a similar "cookie" profile.

24. Mr. Lindo sustained antitrust injury by paying supra-competitive prices to Google to broker the placement of its display advertisements on third-party websites. These anticompetitive overcharges directly and proximately resulted from Google's monopolization of the relevant markets and anticompetitive conduct.

3. Cliffy Care Landscaping, Inc.

25. Plaintiff, Cliffy Care Landscaping LLC, is a limited liability company in good standing, registered in the state of Kansas, with a principal place of business at 15837 S. Mahaffie Street, Olathe, Kansas, 66062.

26. Cliffy Care Landscaping LLC purchased display and in-app advertising through Google Ads between September 2018 and the present.

4. Kinin, Inc.

27. Plaintiff, Kinin, Inc., is a corporation in good standing, organized under the laws of Delaware and registered in California, with a principal place of business at 1104 Camino Del Mar #101, Del Mar, California, 92104.

28. Kinin, Inc. purchased display and in-app advertising through Google Ads between September 2018 and the present.

5. Raintree Medical and Chiropractic Center, LLC

29. Plaintiff, Raintree Medical and Chiropractic Center LLC, is a limited liability company in good standing, registered in Missouri, with a principal place of business at 931 SW Lemans Lane, Lee’s Summit, Missouri, 64082.

30. Raintree Medical and Chiropractic Center LLC purchased display and in-app advertising through Google Ads between September 2018 and the present.

6. Rodrock Chiropractic PA

31. Plaintiff, Rodrock Chiropractic PA, is a professional association company in good standing, registered in the state of Kansas, with a principal place of business at 412 Ames Street, Baldwin City, Kansas, 66006.

32. Rodrock Chiropractic PA purchased display and in-app advertising through Google Ads between September 2018 and the present.

B. Defendants

33. Defendant, Google LLC, is a limited liability company organized under the laws of Delaware with its principal place of business in Mountain View, California.

34. Defendant, Alphabet Inc., is a corporation organized under the laws of Delaware with its principal place of business in Mountain View, California. Google LLC is a wholly-owned and controlled subsidiary of XXVI Holdings Inc., which is a subsidiary of Alphabet Inc.

35. Google LLC and Alphabet Inc. are collectively referred to herein as "Google."

36. Defendant Meta Platforms, Inc., d/b/a as Meta and formerly known as Facebook, Inc., is a Delaware corporation with its principal place of business in Menlo Park, California.

IV. OVERVIEW OF DIGITAL ADVERTISING AND THE AD TECH STACK

37. Businesses have long relied on advertising to promote their products, generate brand awareness, and increase sales. Before the internet age, advertising campaigns were planned and managed by media buyers. If a media buyer needed to help a toy manufacturer reach parents of children, he or she might place an ad in *Parents Magazine*, or in the family section of the local newspaper.

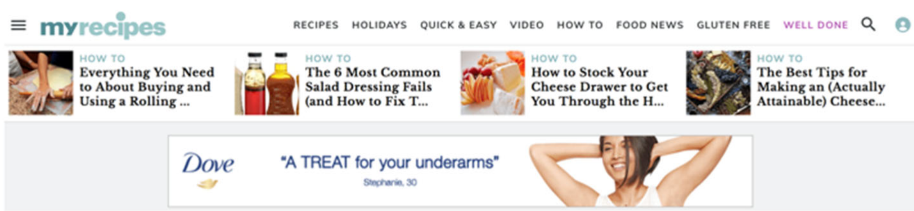
38. Digital advertising works differently. Businesses now aim to target not just a generalized audience with a shared characteristic, but specific individuals with unprecedented precision. More than half of all advertising money in the United States is now spent on digital advertising—approximately $129 billion in 2019 and likely exceeding $300 billion in 2021.

39. The digital advertising economy includes search advertising, display advertising, and social-media advertising markets.

40. Search advertising is the placement of advertisements—often blocks of bolded text—above or alongside the organic search results generated by a search engine. Display of a search ad is based on the search terms a web user inputs into the search engine. If, for example, a person finds herself locked out of her house and searches for nearby locksmiths on Google Search, search advertising will place ads for local locksmith services above the search results.

41. Search advertising is limited to prospective customers who affirmatively search for the advertiser's product or service or for something similar, or who input a related term. Thus, search advertising targets those who may be close to or already considering purchasing that product or service. The advertisement appears when a consumer performs a search linked to the product or service offered by the company sponsoring the advertisement. And the advertiser pays when the user clicks on the advertisement, on a cost-per-click basis.

42. Display advertising, distinct from search advertising, comes in many forms, including banners, images, and videos. The display ads appear next to content on websites and on mobile apps. For instance, an ad for Dove soap might appear as a banner or sidebar on the cooking website "myrecipes":



Or as side bar ads, like this:

Display ads can also appear inside mobile applications, on social media, or in personal email boxes as text-only ads that expand into image ads when opened.

43. Display advertising fills a distinct marketing channel in directing users to the advertiser's website or mobile destination. Display advertising is based not on the search terms the user inputs, but on specific data and characteristics about the *individual* viewing a webpage. While search ads only appear to those who are already searching for a product or service, the targeting of display ads is more general, based on various targeting parameters rather than input queries. Nearly all online advertisers place search ads, and a large majority also place display ads.

44. The key to effective display ads is personalized data about the individual user viewing the webpage. For example, if the advertiser knows certain characteristics about the user, such as interests, income, or location, the advertiser can target ads that are more likely to be of interest to that user. Similarly, if a merchant knows that a particular user showed interest in merchandise from the merchant's website but did not purchase it, the merchant can remarket that merchandise to "nudge" the user to return to the merchant's website and complete the purchase. This unique strategy also displays ads to users with a similar "cookie" profile as users who visited the merchant's website and/or clicked on its advertisement.

45. Suppliers of display advertising space, known as publishers, are operators of websites application developers that have space available for display advertising. Publishers employ third-party tools to find advertisers to purchase ad inventory. Programmatic advertising refers to marketing campaigns organized around an offer by a supply-side platform (SSP) and bids placed by a demand-side platform (DSP) over an ad exchange. Real-time bidding (RTB) is a form of programmatic buying that allows publishers to monetize the advertising space available on their website by selling inventory to buyers through an auction system. The entire auction occurs between the moment an internet user clicks on a link to a web page and the time

the page is rendered on the user's screen—less than 120 milliseconds. Billons of such auctions occur daily. Approximately 86% of online display advertising space in the United States is bought and sold in real time on electronic exchanges using real-time bidding.

46. Search advertising and display advertising serve different purposes, and advertisers do not regard them as substitutes for each other. The Interactive Advertising Bureau—an advertising organization that develops industry standards and conducts research for the advertising industry—separates display and search for purposes of gathering and reporting annual revenues in these two advertising markets, and further distinguishes advertising on owned-and-operated social-media websites from programmatic real-time bidding for advertising on third-party websites and mobile apps.

47. Google is a major supplier of programmatic display advertising on its own properties and also owns multiple exchanges and platforms that advertisers and publishers use to buy, sell, and place display ads ("intermediation" services). Google owns and operates the dominant ad exchange, AdX, while also running buy-side and sell-side intermediation platforms trading on AdX. The role of the ad exchange is critical in display advertising. Exchange transactions are the means by which publishers monetize the attention they earn from web users and by which advertisers can maximize the impact of their ad spend. As such, a competitive and transparent ad exchange is important to parties participating in the "ad stack" at issue in this litigation.

48. Relying on intermediaries like Google that route buy and sell orders from advertisers and publishers, the structure of this broad market resembles the structure of electronically traded financial markets. Just as individual investors trade on financial exchanges through an intermediary brokerage firm, so publishers and advertisers hire intermediaries to trade

on advertising exchanges. But in display advertising, a single company, Google, simultaneously functions as the key intermediary through which buyers (advertisers) and suppliers (publishers) of display advertising trade, in addition to its position as a leading publisher of display advertisements in its own right.

49. The demand consists of advertisers and media agencies running advertising campaigns for businesses. Advertisers and media agencies rely on ad servers and buying tools, including DSPs and mobile ad networks, to store ads, manage bids, purchase digital advertising, deliver ads to publishers and applications, and record transactions.

50. To offer supply, publishers use publisher ad servers (PAS) and in-app mediation services to accept, store, and manage ads; choose where and when ads appear; track the effectiveness of ad campaigns and optimize available inventory. Publishers and application developers rely on SSPs and in-app mediation services to optimize their available inventory of display advertising and interface with exchanges on which ad auctions occur and other sources of demand such as in-app ad networks.

51. The DSP connects to an ad exchange, which combines inventory from ad networks and SSPs with third-party data from a data management platform or data broker. When an ad space on a publisher's site becomes available, the ad exchange holds an auction in which the DSP bids on the impression submitted by the ad network or SSP. Ad exchanges thus serve as the middlemen connecting publishers' ad servers on the sell-side to advertisers' buying tools on the demand-side.

52. Similarly, DSPs submit advertisers' bids for in-app impressions to exchanges including AdX, which compete with demand aggregated by in-app display networks, such as Google's AdMob and the Meta Audience Network (MAN) (formerly Facebook Audience

Network, or FAN), to place advertising within applications whose developers have enabled one or more in-app mediation services. The in-app mediation service runs a final auction and awards the impression to the highest bidder among the various demand sources. To use such a mediation service, a developer must install and integrate the mediation service's software development kit ("SDK") into its app, which in turn is downloaded and installed on a user's mobile device. The SDK then interacts with the in-app mediation service, which solicits bids and selects winners from multiple demand sources including exchanges.

53. Together, the publisher ad servers (PAS), supply-side platforms (SSPs), ad exchanges, advertisers' ad-buying tools, and in-app mediation services and networks make up the "ad tech stack." By connecting publishers and advertisers, an ad tech provider functions as an intermediary broker.

V. RELEVANT MARKETS

54. The following table lists the products used by advertisers in this case, lists the relevant antitrust markets for each type of product, and gives the current name of Google's product in each such market. Google has monopoly or market power in all of these markets. [1]

Type of Product	Relevant Market	Google's Product
Marketplaces for transacting programmatic display advertising	Exchanges	**AdX**
Advertisers' tools for buying web and in-app display advertising	Buying tools for small advertisers	**Google Ads**
	Buying tools for large advertisers	**DV360**

[1] These are the relevant markets for all claims other than Claims III and IV, with respect to which the relevant market (the market for open display and in-app ad inventory traded in Google's Final Clearinghouse Auctions) is described in the relevant sections, including at ¶ 294, *infra*.

55. Google's anticompetitive conduct in these markets for ad-buying tools and exchanges has resulted in Plaintiffs and other advertisers paying more to place ads through AdX, causing antitrust injury and giving rise to antitrust standing.

56. The relevant geographic market is the United States. Market participants recognize this in the ordinary course of business. For instance, Google offers display advertisers the ability to target and deliver ads based on the location of publishers or consumers in the United States. Google also separately tracks display advertising revenue for the United States.

A. Exchanges

1. Exchanges in the United States Constitute a Relevant Antitrust Market.

57. Exchanges for programmatic display advertising inventory ("exchanges") in the United States constitute a relevant antitrust product market. Exchanges are real-time auction marketplaces that match publishers' programmatic display impressions with bids from purchasers (whether submitted by an ad network on its own behalf or by a buying tool on behalf of an advertiser). Exchanges generally connect to a publisher's inventory through the publisher's ad server (e.g., Google's DFP server). Similarly, exchanges deal with advertisers by interfacing with and accepting live bids from networks and buying tools on behalf of advertisers (e.g., Google's DV360); advertisers cannot directly bid on an exchange.

58. Exchanges have unique customers and exhibit unique features, pricing, and entry and usage requirements. Exchanges connect a publisher's available impression with a willing buyer who has returned a live bid. Thus exchanges do not bear inventory risk. As to pricing, exchanges charge a percentage of transaction value. Exchanges also typically impose eligibility requirements; most exchanges require publishers to meet minimum monthly requirements for impression volume and/or revenue in order to sell on the exchange. As most advertisers

primarily place display ads indirectly through exchanges, publishers are compelled to make their inventory available in exchanges.

59. Trading in exchanges provides large publishers and advertisers with significant (and unique) controls to reduce problems of adverse selection, thereby increasing output. For instance, at least until Google imposed Uniform Pricing Rules, discussed below, publishers can calibrate price floors based on the advertiser and the consumer who will see the impression. Advertisers, in turn, can bid on and purchase individual impressions to reduce waste and target potential customers more effectively. Together, these features reduce instances of informational asymmetry associated with adverse selection problems, resulting in increased market output.

60. There are no reasonable substitutes for exchanges. A hypothetical monopolist imposing a small but significant and non-transitory increase in competitive pricing of exchange transactions would not cause a sufficient number of customers to switch to other means of selling and buying display inventory such that the price increase would be unprofitable. Similarly, a hypothetical monopolist imposing a small but significant and non-transitory decrease in the quality of exchanges from a competitive level would not cause a sufficient number of customers to switch to other means of selling and buying display inventory such that the quality decrease would be unprofitable.

61. Exchanges are unique and not interchangeable with ad servers, web networks, in-app mediation tools and networks, buying tools for large advertisers, or buying tools for small advertisers. Those products have distinct sets of features and price points; none permits a publisher to sell an online impression directly to an advertiser without use of an ad exchange.

62. Nor are exchanges interchangeable with the direct sales channel. Selling directly requires substantial additional ongoing investment, different expertise, and a unique skill set on

the part of both publishers and advertisers. For example, publishers and advertisers typically must hire and maintain internal staff to manage one-to-one advertising relationships. As a result, the direct sales channel tends to be reserved for very high-value transactions. Thus, a large online publisher like *The Wall Street Journal* typically does not deal directly with a local Ford dealership, including because the dealership's monthly ad spend would fall far below the publisher's minimum monthly commitment for direct-sale transactions, which are typically thousands of dollars per month. The same publisher would, however, readily transact with that dealership indirectly through an exchange, even if the total value of monthly transactions was just a few dollars.

63. Competition authorities worldwide likewise have recognized for many years that the direct display-ad sales channel is noninterchangeable with indirect, exchange-based sales. In its statement regarding Google's acquisition of DoubleClick, the FTC found "the evidence shows that ad intermediation is not a substitute for publishers and advertisers who place display ads into directly acquired ad inventory or vice versa." In its 2021 settlement with Google concerning anticompetitive practices in the exchange market, the French Competition Authority found that Google's exchange "is not restricted by the competitive pressure exerted by direct sales."

64. Selling a different form of advertising is not a feasible alternative to trading in an ad exchange. The format of the ads a publisher can sell depends on the format of that publisher's content. Other forms of digital advertising, such as in-stream video, social media, search, and in-app, are not substitutes for programmatic real-time bidding, and the ability to sell ads of those various forms requires distinct and substantial investments in content and technology.

65. Nor would purchasing a different form of advertising, such as in-stream video, social media, search, and in-app, be a viable substitute for advertisers. An advertiser requiring

web display advertising would not switch to in-stream video, social media, or search in response to an increase in the price of purchasing display advertising through an ad exchange.

66. Industry participants define exchanges as facilitators of real-time auctions and as noninterchangeable with networks.

67. Google's internal documents confirm that exchanges are a distinct product market. Google analyzes market share with reference only to other exchanges (instead of accounting for ad servers, ad networks, or ad-buying tools). Google measures its exchange market share in terms of share by exchange market revenue or exchange impression volume. In documents dating back to 2011, Google has identified only other exchanges as "key competitors" to its exchange.

68. Google also recognizes that direct sales, exchanges, and networks are distinct. A 2020 Google presentation entitled "Display Business Overview" separately refers to the direct sales channel ("Reservations"), exchanges ("RTB"), and networks, stating: "Conceptually, there are 3 ways Display transacts between adv[ertiser]s and pub[lisher]s: Reservations, RTB, and Network." The document further explained that "[d]isplay is not a monolithic business: within it, there are three paths for transactions, each with distinct characteristics. Reservation: Direct transactions between advertisers and publishers … RTB: Auction connecting advertisers and publishers (primarily large, sophisticated ones), and giving them significant controls. Demand and supply are disaggregated … Network: Closed demand- supply loop, primarily between smaller advertisers and publishers; high degree of automation."

69. The relevant geographic market for exchanges is the United States. Exchanges that are only available in other countries are not substitutes for exchanges located in the United States. The overwhelming majority of publishers and advertisers that use exchanges in the

United States are seeking to connect to supply or demand also within the country. Publishers can obtain the most money for their ad inventory by placing ads that are relevant to users that visit their site, and advertisers can obtain the most return on investment by placing ads adjacent to content that is relevant to the advertiser's business. Thus, exchanges connecting publishers to demand or connecting advertisers to supply that do not share linguistic, cultural, and commercial characteristics are not substitutes for exchanges that do.

70. Further, publishers and advertisers who use an exchange in the United States are subject to different regulatory and legal systems that affect their choice of exchange. Laws and regulations concerning competition, user privacy, and deceptive trade practices vary from country to country. Publishers and advertisers in the United States cannot choose an exchange that does not operate in a manner consistent with their regulatory obligations.

71. Network latency based on geography also affects what exchange a publisher or advertiser uses. Publishers and advertisers prefer to use exchanges that are hosted on servers within a reasonable geographic distance from the publisher's ad server or the advertiser's buying tool. An exchange located outside the United States could not return bids to publishers in the United States in a timeframe that would be competitive with exchanges located in the United States. Nor could an exchange located outside the United States transmit bid requests to buying tools in a timeframe that would be competitive with exchanges located within the United States.

72. Google tracks its share of exchanges by country because it acknowledges that users from different nationalities have different levels of demand for their exchange. Although Google tracks market share both globally and regionally as well, the fact that Google monitors its market share for exchanges in the United States geographic market shows that Google regards

demand for its exchange in the United States as distinct from the demand for its exchange in other geographic markets.

73. A small but significant and non-transitory increase in the competitive pricing of exchanges in the United States would not cause a sufficient number of customers to switch to exchanges outside of the United States such that the price increase would be unprofitable. Exchanges that are available in other countries but not available in the United States connect to sources of demand that are not relevant to users that visit a publisher's webpage located in the United States. Similarly, exchanges in other countries but not available in the United States offer impressions adjacent to content that is not desirable or relevant to advertisers located in the United States. Accordingly, exchanges available in other countries that are not available in the United States are not reasonable substitutes for exchanges available in the United States.

2. Google Has Monopoly Power in the Exchange Market.

74. Google has a monopoly in the exchange market in the United States, as confirmed by both indirect and direct evidence.

75. Google's exchange has had market power since 2010 because it contains a significant and unique pool of advertisers not available through any other exchange—the bids belonging to the hundreds of thousands of advertisers using Google's monopoly buying tool for small advertisers, Google Ads. The collective pool of advertisers bidding through Google Ads on AdX accounts for at least 44 billion programmatic display transactions per month in the United States and about 30 percent of monthly transactions across all exchanges in the United States. To put inventory up for bid to this significant pool of advertisers, publishers must transact in Google's exchange: Google routes these advertisers' bids to only Google's exchange, and the advertisers typically buy only through Google Ads. Thus, publishers must transact in

Google's exchange to receive bids from and sell their inventory to this important pool of advertisers.

76. Google routs advertisers' purchases on Google Ads through AdX, and advertisers bidding through Google Ads account for a large share of transactions on this exchange. Internal documents show that in 2012 and 2013, advertisers using Google Ads accounted for 65 to 74 percent of transactions on Google's AdX exchange, as measured by revenue. Between 2018 and 2019, advertisers using Google Ads purchased 52 percent of impressions transacted on Google's exchange.

77. Publishers who forgo Google's exchange and the demand from Google Ads advertisers see substantial decreases in the number of bids for their inventory, the number of impressions they sell, and the amount of revenue they generate. Hence because the demand flowing through Google Ads is both significant and unique, participating in Google's exchange is a "must" for nearly all publishers.

78. Google touts this "must have" selling point to publishers, stating that "higher yield starts with access to demand …. AdX is the only platform with direct access to the entirety of [Google Ads] demand." Elsewhere, Google explains that AdX offers "massive demand" with "seamless access to [Google Ads]."

79. For publishers, Google's exchange cannot be bypassed. In 2014, industry trade publication Digiday observed that "Google is the operator of the largest ad exchange, AdX." By 2015, 80 percent of the publishers using Google's ad server also contracted with Google's exchange. Given that 90 percent of publishers were already using Google's ad server, it follows that the large majority of publishers were using Google's exchange.

80. In 2019, *The Wall Street Journal* reported that AdX was "the world's largest [exchange] with about half [of] the [overall worldwide] market share." It follows that AdX controls substantially more than half of the United States exchange market because AdX is used by advertisers, more publishers, transacts more revenue, and transacts more volume in the United States than in other countries, according to Google's internal documents. In the twelve months leading up to October 2019, AdX transacted over 60 percent of all display inventory sold through exchanges in the United States.

81. Since then, Google has further expanded its power in the exchange market, with AdX's share of impressions further increasing after it imposed Unified Pricing Rules in 2019, just as Google internally predicted. Thus, analysis of one large publisher's auction records show a substantial increase in the percentage of display inventory sold on AdX once Google imposed its Unified Pricing Rules.

82. In June 2021, the European Commission opened an antitrust investigation to assess whether Google violated EU competition rules by favoring its own online display advertising technology services in the ad tech supply chain, to the detriment of competitors, advertisers and publishers. This investigation showed that Google Ad Manager (commonly known as "GAM"), which is Google's re-branded name for its combination of its AdX ad server and DFP, now has an approximate 90% share in the UK, and that in transactions where both Google Ads and AdX are used (a *de facto* requirement for small advertisers), Google's overall take rate is approximately 30% of advertisers' spend.

83. While Google's AdX is not the only exchange in the United States, its remaining competitors (the exchanges offered by Rubicon, Xandr, and Index Exchange) each hold considerably smaller market shares. These rival exchanges cannot offer publishers access to

Google Ads demand. AdX transacts in excess of 60 percent of display impressions. Data from large publishers show the other three exchanges each typically transact only four to five percent. From a revenue standpoint, as well, those other exchanges transact far less than AdX. In 2018, Google's exchange generated at least $7.6 billion in gross revenue. Xandr generated less than $2 billion and Rubicon and Index Exchange each generated less than $1 billion. Estimates from Rubicon further show that, excluding Google's exchange, *all* other exchanges combined transacted a total of approximately $6 billion. Thus, the minority non-Google portion of the exchange market is highly fragmented. Rubicon's estimates also show that AdX held 64 percent of the market available to exchanges, in terms of ad spend, in 2019 and that this share was expected to grow to 69 percent by 2023 at the expense of other exchanges. Between 2018 and 2019, the increase in AdX's revenue was about five times the amount of the corresponding increase for Xandr, and this differential over time has increased the relative size difference between AdX and its nearest competitors.

84. Google's own employees have recognized its exchange market power. In a 2015 email, Google employees expressed concern that Google might "actually have to compete" with other exchanges in the future.

85. Google's power to raise prices above competitive levels in the exchange market reflects its power. Since at least 2016, Google's exchange has charged supra-competitive prices, with an average take rate of 20 percent of the transaction value. Google charges substantially more than its closest exchange competitors, yet its share of the exchange market continues to grow.

86. Google's exchange is insulated from competition. In 2016, after widespread adoption of header bidding, a price war between exchanges began, and *non*-Google exchanges

began cutting their prices. In 2017, several exchanges revealed their recent price cuts to industry publication AdExchanger: "Less than a week after Rubicon Project slashed its take rate in half, to 10% to 12% ... AppNexus [now Xandr] said its fees are even lower. The company revealed it charges an 8.5% average to the sellers on its platform." Despite these significant price cuts, these rival exchanges were unable to materially increase their market share. Simultaneously, Google's exchange maintained or increased prices while *increasing* its market share. A Google employee emailed internally in November 2017 that she thought exchange "margins will stabilize at around 5 percent. Maybe it will happen by this time next year or in early 2019. This creates an obvious dilemma for us. AdX is the lifeblood of our programmatic business. … What do we do?" Google's 2018 internal documents state that "[r]ecent market dynamics ... are putting pressure on the 20% fee and it is becoming more clear that the market bears the fee primarily because of the exclusive access to our [Google Ads] demand." By 2019, Google had increased its exchange take rate for third-party buyers by one to two percentage points, which was a six to ten percent price increase relative to those rates in 2017. The fact that Google did not lower its exchange take rates during this time—and instead increased them without losing market share—demonstrates that Google's exchange has pricing power and is insulated from competition.

87. Moreover, Google's exchange does not lose market share even though its customers perceive its exchange to be of lower quality than other exchanges on key dimensions. A 2018 survey asked publishers to evaluate exchanges across various dimensions of quality. Google trailed competing exchanges in all five of the key quality dimensions and ranked last in two of the five key dimensions. Notably, Google ranked last in the measure of "alignment with publisher goals and needs." In 2019, a column in AdExchanger observed that publishers

continue to use Google's exchange not because of superior quality, but because of "the demand that Google brings through its buy-side and exchange-related dominance." According to a survey of publishers by Advertiser Perspectives (an advertising industry business intelligence agency), Google's exchange is the "dominant gateway for online advertising"—Google's exchange is "always No. 1" and has "real dominance."

88. The exchange market also is characterized by market exit and lack of recent entry. Microsoft (AdECN) exited the exchange market in 2011, Yahoo! (RMX) in 2015, and Facebook (FBX) in 2016.

89. Google's market power in the exchange market is protected by significant barriers to entry and expansion. A new entrant must achieve a sufficient scale of *both* publishers *and* advertisers using its exchange if it hopes to become viable. Google exploits this barrier to benefit its own exchange and erect further barriers to entry. Google creates barriers for rival exchanges including by causing its publisher ad server to preferentially route transactions to Google's exchange and by preferentially routing Google Ads transactions to Google's exchange.

B. Ad-Buying Tools

90. Advertisers use buying tools to purchase inventory and to deliver their ads to publishers via ad exchanges. There are two distinct types of buying tools—those for small-to-medium advertisers ("small advertisers") and those for large advertisers—and these two types of buying tools are generally not interchangeable with each other.

91. Internally, Google recognizes this distinction. For instance, Google refers to the customers of its ad-buying tool for small advertisers (Google Ads) as "tail and torso advertisers," noting this category typically includes small-to-medium advertisers such as "Bob's Barber." On the other hand, Google refers to the customers of its ad-buying tool for large advertisers (DV360)

as "large buyers" which include agencies and trading desks, as well as the large advertisers who are a "good fit" for DV360.

92. Advertisers purchase both web display and in-app advertisements through Google's ad-buying tools. In fact, Google Ads includes Search, Display, and In-App as defaults when an advertiser sets up a campaign on Google Ads.

1. Buying Tools for Small Advertisers in the United States Constitute a Relevant Antitrust Market.

93. Programmatic display buying tools for small advertisers ("buying tools for small advertisers") in the United States constitute a relevant antitrust market. These tools provide a web interface for advertisers to use to bid on and purchase programmatic display inventory across exchanges and networks.

94. Buying tools for small advertisers exhibit unique characteristics. Broadly speaking, these tools provide small advertisers with a user interface to: (1) set up their display-ad campaigns; (2) input and modify their bidding strategies (e.g., their maximum bids for particular types of inventory); (3) specific particular websites where they would like their ads to run; (4) specify the types of audiences they want to target (e.g., based on users' geography, education level, interests, or parental, marital, or homeownership status, etc.); (5) acquire campaign performance reports; and (6) adjust campaign parameters, including budget, maximum bids, list of websites, and user targets to optimize campaign performance over time. Working with the parameters set by the advertiser, the buying tool will then automatically bid on the advertiser's behalf for ad inventory trading on an exchange or network. These tools generally are unable to bid on inventory that is available only outside of an exchange or network (e.g., Facebook's ad inventory).

95. Importantly, these buying tools are the only way small advertisers are able to disseminate their display advertisements to users across the open web (i.e., on websites whose inventory is available via an exchange or network). Additionally, an advertiser can use such a tool to access inventory from millions of websites available on networks.

96. Buying tools for small advertisers have minimal usage requirements. For instance, Google Ads has no minimum monthly spend requirement. An advertiser could spend just a few dollars each month purchasing ad space trading in networks and exchanges.

97. Buying tools for small advertisers serve a unique set of customers. Because these tools have low or no minimum monthly requirements, customers tend to be small businesses who are otherwise priced out of the more sophisticated buying tools for large advertisers. Customer examples include lawyers, real estate agents, photographers, plumbers, builders, doctors, barber shops, start-ups, and car dealerships.

98. Google recognizes that the set of customers served by buying tools for small advertisers (Google Ads) is unique and distinct from the set of customers served by buying tools for large advertisers (DV360); as Google's sales training materials acknowledge, "[o]n the spectrum of increasing advertiser sophistication, from small businesses to large direct advertisers to agencies, there comes a point of discontinuity where the needs of the buyer fundamentally change." Internally, Google refers to customers of its small advertising buying tool (Google Ads) as "small advertisers," "tail and torso advertisers," and "medium advertisers," which would be "not a good fit" for the more sophisticated and costly buying tools for larger, more sophisticated advertisers that tend to use DV360.

99. As such, an additional critical feature of buying tools for small advertisers is that they are simple and easy to use; the businesses that use them typically do not have the resources

to manage and utilize complex functionality. On the other hand, the enterprise buying tools for large advertisers are considerably more complex; using them typically requires a high minimum spend and a specialized team of people to operate and manage display campaigns. Small advertisers lack these resources.

100. There are no reasonable substitutes for buying tools for small advertisers. A hypothetical monopolist imposing a small but significant and non-transitory increase in competitive pricing of buying tools for small advertisers would not cause a sufficient number of customers to switch to other means of buying display inventory such that the price increase would be unprofitable. Similarly, a hypothetical monopolist imposing a small but significant and non-transitory decrease in the quality of buying tools for small advertisers from a competitive level would not cause a sufficient number of customers to switch to other means of buying display inventory such that the quality decrease would be unprofitable.

101. As Google recognizes, buying tools for small advertisers are unique and not interchangeable with the buying tools for large advertisers. Google's small advertiser buying tool (Google Ads) is used by many thousands of small advertisers in the United States spending several hundred dollars or less a month on display advertising. These advertisers' individual monthly spend falls far short of the high minimum monthly spend requirements for using the enterprise buying tools for large advertisers.

102. Neither are buying tools for small advertisers interchangeable with ad servers, web networks, in-app mediation tools, in-app networks, or exchanges. Those products do not provide small advertisers with tools to run and optimize ad campaigns or to purchase programmatic display inventory across networks and exchanges. Those products also have different features sets and exhibit different entry and usage requirements.

103. Purchasing ad inventory through direct sales channels is not interchangeable with purchasing ad inventory through buying tools for small advertisers. As discussed above, Google and other industry participants recognize that the open display sales channel is distinct from the direct sales channel. Moreover, purchasing advertising through direct deals is not a realistic possibility for small advertisers given the high minimum spend requirements and the resources needed to negotiate deals directly with publishers.

104. Nor would purchasing a different form of advertising (e.g., in-stream video, social media, or search) be a viable substitute for advertisers. Advertisers regard each of these ad formats as distinct and noninterchangeable, typically choosing the suitable type of advertising depending on the goals of a particular ad campaign. An advertiser requiring display advertising would not switch to in-stream video, owned-and-operated social-media advertising, or search ads in response to an increase in the price or degrading of the quality of a buying tool for purchasing open web and in-app display advertising. Regulators in the United States and around the world have found that search advertising does not operate as a significant competitive constraint on display advertising, and vice versa. Google's internal documents likewise track search and display advertising separately.

105. A recent natural experiment further demonstrates the non-interchangeability of owned-and-operated social-media advertising with open web and in-app display advertising. In mid-2020, Facebook faced intense public backlash for hosting "damaging and divisive" content. In July of that year, a sizable group of advertisers (both small and large) responded by halting their Facebook advertising campaigns in a "boycott" of advertising within the Facebook social-media site and app. The stage was therefore set for an unprecedented natural experiment on the degree of substitutability between, on the one hand, owned-and-operated social-media

advertising and, on the other, open web and in-app display advertising (and, correspondingly, the distinct tools used to purchase each). If the two were interchangeable, the advertisers boycotting Facebook would re-allocate their spend through display buying tools. But this is not what happened. Rather, small and large advertisers alike instead overwhelmingly diverted their ad spend to *other owned-and-operated social-media* sites (e.g., Snapchat and Pinterest). Additional evidence further supports this lack of interchangeability; if the advertisers boycotting Facebook shifted spend to advertising on the open web, the resulting increase in demand would lead to higher auction prices for ad inventory on the open web or in-app display. But this did not happen either—a review of major web publishers' open-web display inventory data does not show price increases during the boycott. Hence, this unique natural experiment confirms that advertisers do not consider these two types of advertising (and likewise, the separate buying tools) to be interchangeable.

106. Neither are buying tools for small advertisers interchangeable with tools for purchasing social-media advertising, e.g., on Facebook. While advertisers can, of course, use Meta's buying tool ("Facebook Ads") to purchase display ads on Meta's properties (e.g., on facebook.com), they cannot use it to purchase inventory on other websites (e.g., wsj.com).

107. The U.K.'s Competition Markets Authority's (CMA) investigation and accompanying 2020 report includes a section on competition and market shares in regard to buying tools; that section lists only those tools able to purchase inventory across the open web—it does not include Facebook Ads or Amazon's Ad Console.

108. Buying tools for small advertisers are not interchangeable with any tools offered by Amazon for purchasing ad inventory. Amazon does offer a buying tool for large advertisers, but that tool has a minimum monthly spend requirement of $35,000, which puts it well out of

reach for small advertisers. It is not a substitute for small advertiser buying tools in programmatic real-time bidding markets. Amazon's other ad-buying tool (the Amazon Ad Console) is available only to advertisers who are also registered Amazon vendors. These vendors purchase ads through Amazon Ad Console solely to promote the goods they sell on Amazon (e.g., the "sponsored" ads appearing in response to a search on amazon.com). They cannot use the Amazon Ad Console to purchase display ads on third-party sites (e.g., ads on dallasnews.com, law360.com, or walmart.com). An internal research document from Amazon includes an advertiser's explanation of the value proposition of advertising on Amazon, which is distinct from the reasons advertisers purchase display advertising on the open web: "Amazon is all about shopping conversion," while in comparison, "[w]ith other platforms (i.e., not Amazon), we're building a brand and we're using digital display ads to do that. We don't necessarily look at conversions for display. We look at reach for display and making sure that we're featured in the right targeted websites."

109. Internally, Google recognizes that buying tools for small advertisers make up a relevant product market and that buying tools for large advertisers are in a different product market. Google's internal presentations and documents distinguish between the two types of tools in terms of the distinct product features they provide and different groups of customers they serve. Google participates in the two markets by offering two distinct products: Google Ads is for small advertisers, and DV360 is for large advertisers.

110. The relevant geographic market for buying tools for small advertisers is the United States. Buying tools for small advertisers that are only available in other countries are not substitutes for buying tools for small advertisers located in the United States. The overwhelming majority of advertisers that use buying tools for small advertisers in the United

States are seeking to bid on and purchase ad inventory that is also located in the United States. Advertisers can obtain the most return on investment by placing ads adjacent to content that is relevant to the advertiser's business. Thus, buying tools for small advertisers that connect advertisers to ad inventory that does not share the linguistic, cultural, or commercial characteristics of the advertiser are not substitutes for buying tools for small advertisers that do share those characteristics.

111. Further, advertisers who use buying tools for small advertisers in the United States are subject to different regulatory and legal systems that affect their choice of buying tool. Laws and regulations concerning competition, user privacy, and deceptive trade practices vary from country to country. Small advertisers in the United States cannot use a buying tool that does not operate in a manner consistent with their regulatory obligations.

112. Network latency based on geography also affects what buying tool for small advertisers an advertiser chooses. Advertisers prefer to use buying tools for small advertisers that are hosted on servers within a reasonable geographic distance from the ad exchange or publisher's ad server. Buying tools for small advertisers located outside the United States could not return bids to publishers in the United States in a timeframe that would be competitive with buying tools for small advertisers located in the United States. Nor could buying tools for small advertisers located outside the United States transmit bid responses to ad exchanges in a timeframe that would be competitive with buying tools for small advertisers located within the United States.

113. Google tracks its market share of buying tools for small advertisers by country because it acknowledges that users from different nationalities have different levels of demand for Google Ads. Although Google tracks market share both globally and regionally as well, the

fact that Google monitors its market share for Google Ads for the United States geographic market shows that Google regards advertiser demand for buying tools for small advertisers in the United States as distinct from the demand for buying tools for small advertisers both regionally and globally.

114. A hypothetical monopolist imposing a small but significant and non-transitory increase in the competitive pricing of buying tools for small advertisers in the United States would not cause a sufficient number of customers to switch to buying tools for small advertisers outside of the United States such that the price increase would be unprofitable. Buying tools for small advertisers in other countries that are not available in the United States offer impressions adjacent to content that is often undesirable, irrelevant, or not brand safe for advertisers located in the United States. Accordingly, buying tools for small advertisers available in other countries that are not available in the United States are not reasonable substitutes for buying tools for small advertisers available in the United States.

2. Google Has Monopoly Power in the Buying Tools Market for Small Advertisers.

115. Google has had monopoly power in the United States in the buying tools for small advertisers market since 2009. Google Ads has served far more digital advertisers than any other competing buying tool in the United States. In 2010, 600,000 small and medium size businesses in the United States used Google Ads. Since then, the number of advertisers using this service to purchase display inventory has increased exponentially. At all relevant times, competing ad-buying tools for small advertisers served far fewer advertisers.

116. By 2012, Google Ads had become so dominant that Google employees noted they were "artificially handicapping" Google Ads to "boost the attractiveness of our sellside (AdX)." The implication is that Google's monopoly power over small advertisers' buying tools allowed

Google to reduce the quality of Google Ads without concern that advertisers would switch to an alternative.

117. Google Ads is the largest buyer on the world's largest exchange, Google's AdX. Google Ads buys about 50 percent of the web display impressions transacted in Google's exchange, accounting for about 30 percent of *all* web display impressions transacted across all exchanges in the United States. Internal Google documents estimate that in 2013, Google Ads was "the largest buyer on AdX, comprising 74% of AdX revenue."

118. Most buying tools for small advertisers have exited the display market entirely, leaving small advertisers without a realistic alternative to Google Ads. Meta previously offered a buying tool known as the Meta Audience Networks (MAN) (formerly, Facebook Audience Network, or FAN) for small advertisers to purchase display inventory across the open web (separate from its buying tool for purchasing inventory on Meta's owned and operated properties), but Meta stopped offering web display through this buying tool in 2020 and today only offers in-app display advertising. Amazon does not offer a tool that small advertisers can use to purchase open web display inventory. In 2012, Google internally compared Google Ads to eight competitors; out of those eight competing buying tools, not one still operates as a buying tool for small advertisers seeking to place open display advertising on the web.

119. Small advertisers also almost always "single home" (i.e., use just one buying tool at a time), as using multiple tools at the same time would impose substantial additional time and capital costs small advertisers typically cannot bear. When deciding which buying tool to use, most small advertisers choose Google Ads because it is required to disseminate search advertisements through Google, is the only way to purchase display across the Google Display Network, and essentially is the only tool available to place display ads across the open web.

Unless advertisers manually opt out, Google Ads also places in-app display ads on mobile devices.

120. Google Ads' monopoly power is reflected in its refusal to route most of its small advertisers' bid responses to identical but less expensive display inventory trading in non-Google exchanges and networks. Small advertisers' marketing costs would decrease if Google Ads did this. But because Google Ads faces no real competition, Google has no incentive to provide lower prices to its small advertiser clients.

121. Further evidence of Google Ads' monopoly power in this market is found in the non-transparent pricing Google imposes, including in charging non-transparent fees to advertisers when they purchase impressions via Google's exchange. In a discussion between Google employees about Google Ads' fees, one employee asked: "Buyers don't know that [we] take a 15 percent fee? I didn't realize that." Another clarified that the fee "is not transparent." Google's monopoly power thus allows it to hide the details of the prices it charges to advertisers.

122. Google Ads' monopoly power also is protected by at least three critical barriers to entry and expansion. First, Google controls over 90 percent of search ad inventory and leverages its market power over search-ad inventory into the display advertising markets for ad-buying tools. The importance of search inventory for advertisers makes Google Ads an extremely popular buying platform, with a very large advertiser base. Advertisers using Google Ads for their search campaigns can easily extend the scope of their campaigns to display and in-app mobile advertising.

123. Second, Google Ads charges opaque fees and does not let advertisers readily audit the ad inventory Google purchases on their behalf. Without a legitimate mode of comparison,

small advertisers are hindered from switching to a lower-cost or higher-quality small advertiser buying tool.

124. Third, advertisers use ad-buying tools to keep track of the users they have targeted with ads, the users that have made purchases, and the users that they want to keep targeting with more ads. But Google Ads limits advertisers from accessing and taking this data with them to a rival buying tool. As a result, small advertisers are locked in and have high switching costs. A small advertiser looking to switch to a different ad-buying tool typically would need to start over from scratch after giving up the valuable data and intelligence they otherwise accumulated in Google Ads.

3. Buying Tools for Large Advertisers in the United States Constitute a Relevant Antitrust Market.

125. Programmatic display buying tools for large advertisers ("buying tools for large advertisers") in the United States constitute a relevant antitrust market. These tools provide an interface for large advertisers (e.g., Geico or McDonalds) or their trading desks and ad agencies (e.g., WPP, Group M, Publicis, or Accuen) (collectively, "large advertisers") to bid on and purchase open-web and in-app display-ad inventory on exchanges and networks. Buying tools for large advertisers allow advertisers to optimize their campaigns to achieve their campaign objectives, including purchasing the best quality inventory on exchanges for the lowest prices.

126. Buying tools for large advertisers provide a range of product features in addition to the features typical of tools for small advertisers. These additional features commonly include the ability to: (a) conduct substantially more complex and precise site, user, and audience-based targeting; (b) use more of an advertiser's own proprietary data; and (c) create and deploy highly customized bidding strategies across marketplaces.

127. The buying tools for large advertisers require dedicated and specialized teams of people to manage. The bidding and trading options are so complex that they frequently are not used or managed in-house by the actual advertiser. Instead, they are usually managed by the advertiser's specialized team at a third-party ad agency or at a specialized agency division called a "trading desk."

128. Ad-buying tools for large advertisers exhibit unique entry and usage requirements. Unlike ad-buying tools for small advertisers, these tools typically have very high monthly minimum spend requirements. For example, according to competitive intelligence gathered by Amazon, The Trade Desk's buying tool requires advertisers to spend at least $1 million per year, and Google's own DV360 requires at least $10 million per year.

129. These ad-buying tools offer features that serve a particular type of customer: large advertisers. Internally, Google describes the unique types of customers who license these tools as "large buyers" such as "agencies," "trading desks," and "large advertisers."

130. There are no reasonable substitutes for buying tools for large advertisers. A hypothetical monopolist imposing a small but significant and non-transitory increase in competitive pricing of buying tools for large advertisers would not cause a sufficient number of customers to switch to other means of buying display inventory such that the price increase would be unprofitable. Such a price increase would not cause a sufficient number of customers to switch to using buying tools for small advertisers, ad servers, exchanges, networks, advertising on owned-and-operated sites, such as social-media sites (e.g., Facebook's social-media properties), or advertising on Amazon so as to render the price increase unprofitable. Similarly, a hypothetical monopolist imposing a small but significant and non-transitory decrease in the quality of buying tools for large advertisers from a competitive level would not cause a

sufficient number of customers to switch to other means of buying display inventory such that the quality decrease would be unprofitable. Such a quality decrease would not cause a sufficient number of customers to switch to using buying tools for small advertisers, ad servers, exchanges, networks, or advertising on social-media sites or on Amazon such that the quality decrease would be unprofitable.

131. The tools for small advertisers do not provide large advertisers with the unique features they need to manage their large and complex ad campaigns. Industry sources discuss competitors in this specific market and list its unique characteristics and customers. A research document by Amazon characterized buying tools for large advertisers as providing "nearly limitless levels of configurability including the ability to adjust settings that directly influence auction dynamics," and contrasted these product features to the "more automated" functionality offered by buying tools for small advertisers. Thus, buying tools for large advertisers are unique and not interchangeable with the buying tools for small advertisers.

132. Neither are buying tools for large advertisers interchangeable with ad servers, web networks, in-app mediation tools, in-app networks, or exchanges. Those products do not provide advertisers with tools to optimize ad campaigns and purchase programmatic display inventory across networks and exchanges. Those products also have different sets of features and exhibit different entry and usage requirements. Many suppliers of buying tools for large advertisers, such as The Trade Desk, do not offer networks or exchanges.

133. Buying tools for large advertisers also are not interchangeable with the direct sales channel. Google and other industry participants recognize that the indirect sales channel is distinct from the direct sales channel.

134. Nor would purchasing a different form of advertising (e.g., in-stream video, social media, or search) be a viable substitute for advertisers. Advertisers regard each of these ad formats as distinct and noninterchangeable, typically choosing the suitable format depending on the goals of a particular ad campaign. An advertiser requiring display advertising would not switch to in-stream video, social media, or search ads in response to an increase in the price or degrading of the quality of a buying tool for purchasing open web display advertising. Thus, large advertisers who participated in the Facebook boycott described above reallocated their spend primarily to owned-and-operated social-media sites (e.g., Snapchat and Pinterest), not to display advertising on the open web.

135. Neither are buying tools for large advertisers interchangeable with tools for purchasing social-media advertising. While advertisers can use Facebook's buying tool ("Facebook Ads") to purchase display ads on Facebook properties (e.g., on facebook.com), they cannot use it to purchase inventory on other websites. Nor can they use Facebook's tools to perform other crucial functions of a buying tool for large advertisers.

136. Competition authorities in other countries have recognized that ad-buying tools for large advertisers are not interchangeable with other products. The UK's CMA found that these tools offer unique functionality and are not interchangeable with exchanges, networks, or ad servers. The French Competition Authority likewise concluded that buying tools for large advertisers are not substitutable for exchanges or networks.

137. Google itself treats buying tools for large advertisers, such as its DV360 product, as occupying a standalone product market. For purposes of its internal analysis of DV360's market share, Google does not consider its own buying tool for small advertisers (Google Ads) as operating in the same market. In 2010, Google paid $81 million to acquire Invite Media for

the purpose of developing a product targeting large advertisers, separate from Google's already-existing buying tool for small advertisers.

138. The relevant geographic market for buying tools for large advertisers is the United States. Buying tools for large advertisers that are only available in other countries are not substitutes for buying tools for large advertisers located in the United States. The overwhelming majority of advertisers that use buying tools for large advertisers in the United States are seeking to bid on and purchase ad inventory also within the country. Advertisers can obtain the most return on investment by placing ads adjacent to content that is relevant to the advertiser's business. Thus, buying tools for large advertisers that connect advertisers to ad inventory that do not share the linguistic, cultural, or commercial characteristics of the advertiser are not substitutes for buying tools for large advertisers that do.

139. Additionally, advertisers who use buying tools for large advertisers in the United States are subject to different regulatory and legal systems that affect their choice of buying tool. Laws and regulations concerning competition, user privacy, and deceptive trade practices vary from country to country. Large advertisers in the United States cannot use a buying tool that does not operate in a manner consistent with their regulatory obligations.

140. Network latency based on geography also affects what buying tool for large advertisers an advertiser chooses. Advertisers prefer to use buying tools for large advertisers that are hosted on servers within a reasonable geographic distance from the ad exchange or publisher's ad server. Buying tools for large advertisers located outside the United States could not return bids to publishers in the United States in a timeframe that would be competitive with buying tools for large advertisers located in the United States. Nor could buying tools for large advertisers located outside the United States transmit bid responses to ad exchanges in a

timeframe that would be competitive with buying tools for large advertisers located within the United States.

141. Google tracks its market share of buying tools for large advertisers by country, recognizing that users from different nationalities exhibit different levels of demand for DV360. Although Google tracks market share both globally and regionally as well, the fact that Google monitors its market share for DV360 for the United States geographic market shows that Google regards advertiser demand for buying tools for large advertisers in the United States as distinct from the demand for buying tools for large advertisers both regionally and globally.

142. A hypothetical monopolist imposing a small but significant and non-transitory increase in competitive pricing of buying tools for large advertisers in the United States would not cause a sufficient number of customers to switch to buying tools for large advertisers outside of the United States such that the price increase would be unprofitable. Buying tools for large advertisers in other countries that are not available in the United States offer impressions adjacent to content that is often undesirable, irrelevant, or not brand safe for advertisers located in the United States. Accordingly, buying tools for large advertisers available in other countries that are not available in the United States are not reasonable substitutes for buying tools for large advertisers available in the United States.

4. Google Has Market Power in the Market for Buying Tools for Large Advertisers in the United States.

143. Google has market power in the market for large advertiser buying tools.

144. DV360, formerly known as "DoubleClick Bid Manager," displays ads across more than 90% of the Internet. *Forbes* noted that Google "is effectively a gatekeeper to the digital ecosystem with its DV360 dominating programmatic display." The French Competition Authority found that DV360 generates the most revenue of any other buy-side software and has

exhibited significant growth. Likewise, the UK's CMA found that DV360 "is the largest DSP" and that its market share increased from 2018 to 2020. The CMA further explained that "exclusive access to YouTube provides a very significant advantage to DV360 and creates a barrier to the growth of competitors." According to the European Commission's Final Report, DV360 has a 30-40% market share across *all* ad-buying tools, and its share of the market for buying tools for large advertisers is higher than that.

145. DV360 is significantly more expensive than other ad-buying tools for large advertisers, demonstrating that Google has the ability to raise prices in this market without fear of losing share to the competition.

C. The Relevant Product Markets Exclude Advertising on Closed-Ended or "Walled Garden" Websites.

146. Due to its nature, purpose, and audience, display advertising placement services are not interchangeable with services that place advertising on closed-ended or "walled garden" websites, such as social-media platforms that sell placements on its own properties. Google's automated display advertising services place advertising on websites and in mobile apps owned and operated by third-party entities. Advertisers use Google's services to access potential customers on virtually any website or mobile app.

147. The House subcommittee report issued October 6, 2020, "Investigation of Competition in Digital Markets," recognizes that "[w]ithin display advertising, there are two separate 'ad tech' markets . . . : first-party and third-party. 'First-party' platforms refer to companies such as Facebook [now Meta], Twitter, and Snap which sell ad space on their own platforms directly to advertisers. . . . Third-party display ad tech platforms are run by intermediary vendors and facilitate the transaction between third-party advertisers . . . and third-party publishers."

148. From the standpoint of advertisers, programmatic display advertising complements, rather than substitutes for, other forms of digital advertising, including search and social-media advertising. Digital advertising experts Ali Parmelee and Jason Linde recommend "a blended approach" that relies on both programmatic and social-media advertising to attract separate channels of online user traffic: "In other words, it should not be Google or Facebook, it should be Google and Facebook." Another major industry resource, hubspot, explained that "in fact, Facebook Ads and Google Ads are complementary, each offering unique benefits to marketers." Therefore, an advertiser cannot rely solely on the placement of display advertising on particular social-media platforms without forfeiting the ability to reach consumers who do not use that platform. Moreover, users of those platforms may be less receptive to ads appearing at a destination used primarily for social networking and messaging, as opposed to destinations used by consumers to shop for goods or services.

149. Meta sells its supply of inventory for advertising on its owned-and-operated social-media platforms as a first party through a self-contained and closed-ended system separate from the ad tech stack in which MAN offers services to place web and in-app open-display ads, and in which Google holds a monopoly as the dominant broker.

150. Advertising on Facebook or Instagram is not a substitute for appearing on the wide range of other publishers' sites accessible through programmatic display transactions. The closed-ended advertising services offered by Meta (and by other closed-ended platforms like Amazon, Twitter, and Snapchat) are not substitutes for the open-ended, cross-web system Google offers and do not compete for the same business. Those other sites do not provide the *system* and *tools* to connect advertisers to publishers—the suite of services comprising the relevant markets here.

D. The Relevant Product Markets Exclude Direct Placements.

151. The markets for brokering of programmatic display ads also are distinct from the much smaller market for unbrokered direct display-ad placement. While it is theoretically possible for an advertiser to connect directly with a publisher to negotiate the placement of advertisements onto the publisher's supply of advertising space, for the vast majority of advertisers doing so is impractical. Well over 90% of all online display advertising space in the United States is bought and sold on ad exchanges in the electronic real-time bidding market. Direct sales (also known as "guaranteed demand") involve only a miniscule percentage of display-ad transactions, for only the most valuable publisher inventory, and command the highest prices.

152. At least thousands of companies act as publishers with display advertisement inventory but, in general, these companies neither perform nor provide services that facilitate placement of advertisements in that space. Only a few companies—Google chief among them—provide display advertising intermediary matching and transaction services.

153. Internet display advertising is focused on targeting individuals. Advertisers seeking to remarket to a user who previously was on their site in an effort to nudge that user to return and complete a purchase do not care where the prospective customer sees the nudging ad. Buying ads directly from a particular website would not serve this remarketing purpose.

154. Advertisers prefer to use intermediaries that can identify a profiled user; ad prices drop dramatically when a user cannot be identified.

155. Nearly all advertisers lack the financial or manpower resources and access to negotiate directly with specific publishers to place their display ads, and even advertisers with the ability to do so prefer not to limit their placement of display ads to discrete websites.

Publishers and advertisers generally rely on third-party display advertising services to facilitate the placement of online display ads.

156. In the rare instances where select advertisers can purchase "directly from the publisher" they can do so via manual media buying, programmatic direct buying, or a private marketplace (PMP). Manual media buying is antiquated and now seldom done. Programmatic direct and private auctions are the only current ways to purchase advertising directly from publishers. Programmatic direct buying is done under very limited circumstances of either specific invite from the publisher to participate in a private auction, or directly, without an auction, at ultra-premium prices most advertisers cannot afford. Ads sold through programmatic direct are typically tied to premium publishers (e.g., *Forbes*) that erect paywalls for users and reserve a limited percentage of their display-ad inventory for which they can demand a premium price from well-capitalized advertisers, which receive guaranteed ad space in return. Similarly, with PMP, the participants are large enterprise advertisers and marketers, and only a handful of large advertisers (e.g., Nike, Barclays) are invited to bid on a publisher's inventory. PMP is typically offered only by publishers like major media sites that can offer premium, expensive inventory.

157. Small and medium-sized advertisers cannot access this exclusive inventory because they not invited to bid by the publisher, and even if they were, they could not pay the high prices the premium publisher charges. In sum, private invite-only auctions and direct purchasing account for a very low percentage of display advertising, and they are no substitute for real-time bidding on the open web. Thus, direct sales do not constrain the fees Google charges for its programmatic display-ad brokering services.

E. The Relevant Product Markets Exclude Non-Digital Advertising.

158. For similar reasons, brokering services for online display advertising cannot be substituted with traditional forms of advertising, such a print, television, radio, or billboard advertisements. None of those marketing channels relies on individual targeting based on individual user data and profiles—the entire driver of programmatic or automated display advertising. Recent pricing and bid data from various exchanges demonstrate that, unless they can know the identity of the users being targeted, advertisers often avoid ad auctions altogether. A 2018 Google study reported that the prices for ad space trading on Google's exchange drop by half or more when advertisers cannot identify users associated with the ad space for sale. According to Index Exchange, the number of bids for ad space on Mozilla Firefox pages declined by 38% after that internet browser started blocking cookies permitting identification of users.

159. Digital advertising is different in kind from traditional forms of advertising, including because it reaches targeted customers individually and because digital advertisements can be continuously updated and improved based on data showing how consumers are responding. Each display ad is targeted in real time to a specific user on a particular website based on known identifiers about that user's personal characteristics, buying habits, location, wealth, likes, dislikes and so forth. Nothing similar is remotely possible with traditional forms of advertising which cannot be directed to individual consumers with anywhere near that degree of precision.

160. Other types of advertising also cannot provide the re-marketing capability that is unique to display advertising. Display advertising targets consumers whose internet browsing or purchase histories reflect an interest in a product, service or website, and the advertising seeks to

redirect the consumer back to the advertiser's product. Non-digital advertising cannot substitute for this function.

161. Additionally, the relevant markets here embrace the brokering *services* for placement of a unique type of advertising, and other advertising channels do not serve the same purpose as these brokering services. No other type of advertising can substitute for the function of the display-ad intermediation services Google offers, which allow advertisers to reach potential customers across a broad range of publication sites and mobile applications, relying on user data and algorithms to optimize the targeted placement of advertising.

F. Programmatic Display Advertising and Search Advertising Are Economically Distinct Products.

162. For reasons already stated, brokering services for display advertising are not reasonably interchangeable with search advertising. These two forms of digital advertising perform different roles, serve complementary purposes in marketing campaigns, and are treated by advertisers and marketing firms as distinct.

163. Search is intent-based advertising that seeks to induce consumers who have already shown an interest in buying a product or service to make a purchase. Display, in contrast, is suitable for raising awareness about a product, service, or brand and reaching new audiences that may not yet have shown an interest. Because of this basic difference in how the two forms of advertising function in relation to potential customers, they do not reasonably substitute for each other.

164. According to Google's chief economist, "[o]ne way to think about the difference between search and display/brand advertising is to say that 'search ads help satisfy demand' while 'brand advertising helps to create demand,'" and "[d]isplay and search advertising are

complementary tools, not competing ones." Search and display advertising, by Google's own admission, thus do not compete for the same business but are in distinct antitrust markets.

165. Also, as noted above, display advertising performs a unique function in advertisers' re-marketing campaigns. Search advertising cannot accomplish this re-marketing given that the purpose of this strategy is to target a discrete set of potentially interested users with display advertising. Numerous class members, including Plaintiffs, relied on display advertising brokered by Google to follow users around the web with re-marketing campaigns aiming to increase user "conversion" into paying customers.

VI. GOOGLE'S ANTICOMPETITIVE AND DECEPTIVE CONDUCT

166. The United States Department of Justice has noted that Google has "created continuous and self-reinforcing monopolies in multiple markets." Google's set of anticompetitive and deceptive acts described in this Complaint were part of a unified, long-term exclusionary strategy the combined effect of which was to roll back competition, giving Google unchecked power across the ad tech stack connecting advertisers and publishers.

A. Google's Acquisitions, Dominance in Search, and Control of User Data Created the Conditions for Its Monopolization and Led Most Advertisers to Use Only Its Display Advertising Services.

167. Google laid the groundwork for the more recent conduct in its monopolization scheme by acquiring rival firms to avoid competition and leveraging its dominance in search advertising. Since 2007, Google has made numerous key acquisitions in the interest of taking control of the entire ad tech stack. These acquisitions were instrumental to the first part of Google's monopolistic scheme—to absorb competing firms to avoid competing with them with the purpose and effect of building and consolidating its monopoly.

168. Through these strategic acquisitions, Google absorbed various competing firms to eliminate competitive threats and created the market power and protective conditions that

enabled its other restraints. Google's strategy, as revealed in its internal documents produced to Congress, was to acquire a series of ad-tech competitors and combine products to foreclose competition. Google used these acquisitions to solidify its power and capitalize on what its internal documents call "the synergies/inter-relationships from owning all these pieces."

169. Senator Klobuchar stated that, "[w]ith the benefit of hindsight, it seems obvious that [Google's] acquisitions were undertaken by the company in order to add to its market share and without explanation . . . other than for Google to establish and maintain the monopoly power it currently has." The House subcommittee report issued October 6, 2020, "Investigation of Competition in Digital Markets," recognizes that Google's series of acquisitions in the relevant market "enabled it to gain a controlling position across an entire supply chain or ecosystem. Google's acquisitions of DoubleClick, AdMeld, and AdMob . . . let Google achieve a commanding position across the digital ad tech market."

170. Documents that Google produced to Congress show that Google acquired companies to absorb its competition and combine products along the ad stack instead of competing on the merits. An internal Google presentation from July 2006 included a slide titled "Build a Self-Reinforcing Online Ads Ecosystem," which noted in part that acquiring DoubleClick or Atlas could create "self-reinforcing benefits" for Google's integrated ad business.

171. In 2007, Google purchased the leading ad server, DoubleClick, which provided the basic technology for Google's current PAS, and in 2010, Google acquired InviteMedia. In 2009, Google acquired AdMob, the largest ad server for the then-nascent mobile application market, which has since grown exponentially. The technology from Invite Media, which Google acquired in 2010, was re-launched in 2012 as DoubleClick Bid Manager and eventually Google

converted the technology from InviteMedia into its main DSP, Display & Video 360. In 2011, Google purchased AdMeld, one of the largest SSPs in the display advertising industry, which it integrated into AdX, Google's existing exchange. And in 2014, Google bought Adometry, an analytics and attribution provider it then integrated into Google Analytics. Together, these acquisitions reveal a business objective of occupying the entire ad stack and the connected analytics market through buying up the competition.

172. By 2015, the early exchanges that had initially outperformed Google were selling at a discount price or had folded. The market shares of the DSPs that once led that market segment declined in parallel.

173. After acquiring potential rivals, Google consolidated its monopoly across the ad tech stack through a series of product mergers whereby it bundled two distinct products together and rebranded the integrated entity as a single product. Google blurred the distinction between its ad server and exchange by reclassifying its ad-serving revenues in its shareholder reports and by merging the two into a single new product that it named Google Ad Manager. Such mergers increased switching costs for advertisers—and barriers to entry for competitors—for services that already carried high switching costs.

174. In an internal email from 2010, discussing Google's potential development of a demand-side platform for advertising agencies (a "bidder"), the executive in charge of Google's display business wrote: "The primary benefits on having a bidder are eliminating the disintermediation risk and substantially increasing display spend with Google from agencies (through the combined use of DFA – bidder – AdX). . . . We are looking at options to accelerate this (potentially through M&A for example)."

175. The "disintermediation risk" that Google sought to eliminate resulted from the competitive, transparent conditions in the display advertising exchange market at the time, which diverted ad money away from Google. Thus, Google's plan was to *combine* products to increase its revenue from "display spend" and lock in bidders to its new and consolidated intermediation services.

176. Google achieved its stated goal of gaining dominance by "eliminating the disintegration risk" from competing firms. Because of Google's market dominance, publishers and advertisers now have little choice but to use Google's intermediation services. Nexstar Media Group, Inc., the nation's largest local news company, tested what would happen if it stopped using Google's technology to place ads on its websites. Over just a few days, the company's ad sales plummeted.

177. Google is the dominant provider of online search and search advertising in the United States—approximately 95% of internet searches are performed on Google's search engine. Google took advantage of its monopoly in search and search advertising to hoard key data for targeting users related to individual preferences, characteristics, and the performance of ads. The prices that an online advertiser is willing to pay depend on two crucial factors: the ability to identify *who* is loading the page or mobile application on which the ad may be displayed, and the ability to connect that user's identity with more information about them. Google understands that online advertising is more effective when it is targeted, displaying products or services a user is more likely to want. So the user data Google has acquired from its search and search advertising monopolies—including gender, age, location, and browsing history—influence not just the types of ads a user will see, but also the prices advertisers are willing to pay. "The exact same ad, on the same website, at the same time, could be worth vastly

different amounts to two different buyers depending on how much they know about the consumer being targeted," explained Ari Paparo, a former Google executive who founded the advertising company Beeswax. "User data is everything."

178. The targeting of display ads begins the moment a user clicks to visit a web page. Typically, the user's IP address and location, along with the URL of the web page, are swiped from the user's browser without their explicit knowledge. This data then informs the instantaneous ad auctions that occur in the split second before the web page appears to the user. The goal is to build and deploy as specific a portrait about the user as possible, primarily by linking their device with their identity. Web cookies, tags, and "fingerprinting" of mobile devices are common tools for doing so.

179. Because of its dominance, including in search, Google can track users' visits to at least 70% of the top one million sites on the internet. Google's tags (including as a third party) are used to track user behavior on over 80% of popular websites.

180. Further, because search advertising targets users who have already shown some interest in the product or service from their search, few online advertising campaigns bypass online search as a platform for marketing. Search advertising accounts for at least part of the ad spend of nearly every advertiser engaged in online advertising.

181. When an advertiser establishes a Google Ads account to use in placing search advertisements, Google Ads is set as the default account for placing both search *and* display advertisements. Moreover, Google restricts access to data relating to web searches performed on Google Search from advertisers using rival service providers. As a result, an advertiser running both search and display ads cannot track the performance of its search ads, and cannot optimize its search *or* display-ad campaign, unless it relies only on Google to place its display ads. Nor

does Google allow small advertisers to export data needed to switch from Google Ads to another ad-buying tool, including information about the consumers reached by their search and display advertising campaigns. Google prevents advertisers who attempt to use another display-ad provider from accessing or exporting such data as which users have been targeted, which users have made purchases, and which users ideally should see more ads. Advertisers cannot combine such information with internal or third-party data to set or adjust display advertising strategy unless they use only Google to broker their digital ads. These restrictions prevent advertisers from switching away from Google Ads—to access the search and other data over which Google has monopoly control and which is key to effective display advertising, an advertiser is coerced into using Google's products in the separate market for display advertising services.

182. Google's Ads Data Hub (ADH) allows an advertiser who accepts these restrictions to view the data from its search ad campaign that shows which customers clicked on Google Search ads and to combine it with other data, such as third-party data audience metrics or internal company data about existing customers. After determining a display advertising strategy using that combined data, the advertiser can export the necessary information—but only to a *Google* display-ad product. In other words, the only way to export information from ADH is to send it to another service owned by Google.

183. In order to display a specific, targeted ad to a particular user, the ad server assigns a unique user ID to each web user, which allows the publisher, the ad exchange, and the advertiser to know characteristics of that user. An advertiser can link the ID to a specific identity and certain characteristics about the user such as where he or she lives and what products he or she have purchased. The user ID allows the advertiser to target a specific ad to the online space that the individual user is viewing. It also allows the advertiser to track whether the user clicks

on an ad or purchases a product and allows the advertiser to cap the number of times a user is shown a particular ad.

184. After acquiring DoubleClick, Google began hashing or encrypting user IDs for each publisher using Google's ad server, as well as for each advertiser bidding through Google's ad-buying tools. Consequently, advertisers using *non*-Google exchanges and ad-buying tools cannot access these encrypted user IDs. They cannot know the identity of a user associated with a publisher's impressions, know if they are bidding on *valuable* impressions, cap the frequency at which any given user is shown the same ads, or target specific audiences.

185. Because Google obscures DoubleClick IDs for all parties other than Google, advertisers that use more than one buying tool at a time risk inadvertently bidding against themselves in exchange transactions, driving up the price they would pay. And in 2018, Google also stopped allowing advertisers to access the encrypted user IDs from ad campaign reports. Advertisers need this information to hire non-Google ad campaign measurement firms. Advertisers that stay within Google's services exclusively and use its ADH product can still access these IDs.

186. Google's leveraging of its search and other data restrains competition with an enhanced effect because advertisers almost always use a single DSP for a given advertising campaign. Advertisers use a single DSP for a campaign largely because doing so allows them to manage frequency caps (limits on the number of times the same user is shown an ad) during the campaign and facilitates audience management and reporting. Thus, an advertiser cannot advertise on YouTube, Google Search, *and* other publisher websites without experiencing significant costs and inefficiencies from using a different advertising service provider to broker distribution of the ad campaign into each forum.

187. To illustrate Google's vast advantage over any other publisher in accessing and monetizing data, consider two hypothetical online publishers, CNBC and the *New York Times.* Suppose, for example, that a user named Mary visits CNBC's website in the mornings, where she reads about financial markets, and visits the *New York Times* in the evenings to read the book review section. CNBC knows that Mary follows financial markets and might monetize her view at a $30 CPM (cost per thousand impressions). The *Times* knows that Mary likes to read books and might only monetize her at a $10 CPM. If the *Times* can somehow find out that Mary is reading CNBC in the mornings, then when Mary visits the *Times* book review section in the evening, the *Times* can target her as someone who follows the markets and monetize her at $30, too.

188. Since the two are competitors in the supply side of the display advertising market, CNBC would not want to share with the *Times* what Mary reads on cnbc.com. If CNBC is selling ads to its audience of financial readers at a $30 CPM, and the *Times* can access CNBC's readers and their reading patterns, then the *Times* could undercut CNBC and sell ads targeted to CNBC financial readers for, say, $25 instead of $30.

189. Google uses its ability to track users across the web to extract such a large advantage in display advertising markets that rivals are effectively excluded. Google tracks users through its analytics and ad-serving products, which it combined and rebranded as the Google Marketing Platform. While publishers like CNBC and the *Times* would never share with each other user information that gave each a competitive advantage, they have no choice but to share user tracking information with Google, which acts as both their ad broker and supply-side competitor. This not only affects the publishers, who need to compete with Google for ad supply, but also advertisers, who depend on the same user data, but on the buyer-side of the

transaction. With more information than the other publishers bidding on an advertisement, and with control of the auction process, Google can ensure that advertisers pay supra-competitive prices while publishers are paid as little as possible and Google takes a large cut of any deal.

190. Google's exclusive access to its proprietary data from its own widely used products and services like Chrome, Gmail, Maps, and Android, which further widens its substantial advantage over other programmatic display advertising services. Google relies on this data, which is generally unavailable to competing bidders, when bidding on its own ad exchanges to win contracts to display ads. Potential rivals for programmatic display advertising contracts cannot compete to win business without access to this data.

191. As Senator Hawley told Google's witness, "you're using your position in search and YouTube in order to give yourselves a dominant position in the ad stack . . . . [T]he concern is, is that you control YouTube and search, which are the dominant platforms; you control massive amounts of consumer data that you have harvested from your other consumer-facing platforms—Gmail, Google Maps, G-Suite, etcetera. You then use those advantages in the ad stack at every single layer, every layer of which you exercise dominance in. . . . This looks like monopoly upon monopoly, in a classic case of tying."

192. Digital ads trade on several auction markets but Google ensures that its own display advertising inventory can only be purchased through its proprietary auctions. As a result, the most effective, data-driven inventory stays within Google's control and potential competitors are excluded.

193. Google also conceals key data to stifle competition with its display advertising systems. For instance, Google does not disclose its take rate, removes time-stamp information on bids, and conceals information about the performance of the digital ads it brokers, such as

how many impressions are shown to actual users, as opposed to bots. Google's multiple failures of transparency reinforce its dominance of the display-ad market, deprive advertisers of bargaining power, and deter potential rivals from attempting to enter and compete in the relevant markets.

194. When acting as an intermediary, Google conceals from publishers and advertisers the price actually paid to Google for an ad placement. Even so, the consensus among knowledgeable publishers and advertisers is that Google's "ad tech tax" is high, particularly in comparison to fees charged in non-programmatic ad markets. Non-transparent pricing enables Google to engage in arbitrage out of view, and to increase its monopoly rents. In a competitive market Google's withholding of fee-related information would risk its losing business to more transparent rivals because the information withheld would allow advertiser customers to compare competing advertising choices and make optimal choices about how to bid for advertising inventory. A market participant observed in congressional testimony that "Google could make the process 'more transparent,' but given Google's financial stake in maintaining secrecy, 'there is no incentive to do so.'"

195. Although Google redacts its take rate from trading or auction records on both the buy-side and the sell-side, service providers in competitive markets generally must furnish their customers detailed accounts of the services they are providing to justify the prices they charge. Studies have shown that about 15% of display advertising transaction costs are unaccounted for—these form a portion of Google's monopoly rents. In surveys conducted by Association of National Advertisers estimating take rates, participants reported it was impossible or very difficult to obtain transaction-level pricing data related to Google's brokering services.

196. Google also removes time-stamp information on bids, which publishers previously had used to optimize their pricing. Moreover, Google conceals information about the performance of the digital ads it brokers, such as how many impressions are shown to actual users, as opposed to bots. Google's multiple failures of transparency reinforce its power in the display-ad market and prevent advertisers from knowing if they are wasting their money.

197. In sum, Google controls the advertising auction process and controls all of the data that allows participants in this process to participate effectively. As a result of Google's data hoarding, if an advertiser were to attempt to run a display campaign other than through Google, it would blind itself to whether its ads are reaching the right consumers in the right places at the right time. The U.K. CMA's 2020 report notes that Google "has been able to leverage the market power from its owned-and-operated advertising inventory into the open display market and within the ad tech stack, making it harder for third-party intermediaries to compete," and that "greater competition and transparency would put downward pressure on" fees borne by advertisers and publishers.

198. Google's conduct and internal messaging also reflect its executives' awareness that Google has used its monopoly power to restrain competition in these interlocking markets. As DOJ noted, "Google employees were instructed to avoid using terms such as 'bundle,' 'tie,' 'crush,' 'kill,' 'hurt,' or 'block' competition, and to avoid observing that Google has 'market power' in any market."

B. Google's Scheme to Monopolize Injured Advertisers Through Various Auction-Rigging Devices and Anticompetitive Restrictions.

199. In its September 13, 2022 Opinion & Order, the Court identified categories of anticompetitive conduct that harm the class of advertisers on whose behalf this Complaint is brought. While the preceding section provides background on how advertisers have been

coerced to place display ads using only Google's services, this section sets out the particular anticompetitive or deceptive acts and processes carried out by Google in furtherance of its monopolization that directly injured advertisers.

200. Google's conduct that destroyed competition and misled market participants has harmed both small and large advertisers. In a competitive market, advertisers would benefit from ad-buying tools competing on price and quality (e.g., the extent to which the tools maximize advertisers' best interests). Google's exclusionary conduct set out below has enabled it to charge supra-competitive fees, decrease quality below competitive levels, and decrease output in the three markets relevant to this Complaint.

1. Dynamic Allocation Harmed Competition in the Ad Exchange Market and Injured Advertisers.

201. Google foreclosed competition in the market for exchanges with a program introduced in 2010 called "Dynamic Allocation." Dynamic Allocation was a setting available to publishers that allowed AdX to view historical bid data from rival exchanges. With Dynamic Allocation enabled, Google only needed only to beat the historical average bid price from competing exchanges (e.g., by $.01) rather than compete against the real-time bid for a given auction. With Dynamic Allocation, Google's DFP ad server terminated impartial exchange order routing and gave Google's AdX exchange a first right of refusal at depressed prices, allowing Google to maintain and profit from its monopoly in the ad exchange market.

202. The adoption of Dynamic Allocation followed certain changes in how publisher ad servers placed bids on ad exchanges. Before 2009, a publisher using Google's DFP ad server would rank in order which ad exchanges would be permitted to bid on an available impression—a process known as the "waterfall."

203. Google's DFP ad server would offer impressions on exchanges in the order selected by the publisher, meaning that if a higher-ranked exchange did not sell the impression (i.e., meet the publisher's reserve price), the ad server would move sequentially to the next exchange on the publisher's list until the impression was sold.

204. This system of allocation of publisher's inventory across multiple exchanges did not favor one exchange over another. Once a publisher established the sequence for the relevant exchanges, Google's ad server faithfully carried out those instructions. If an exchange performed well for a publisher (e.g., because it attracted advertisers willing to bid top dollar for impressions on that publisher's site, or because the publisher wanted to be associated with advertisers on that exchange), then the publisher would have an incentive to reward that exchange with a higher place in the publisher's waterfall. Conversely, if an exchange's bid prices or quality performance failed to justify its place in the waterfall, the publisher would have an incentive to demote that exchange. Publishers benefited from exchanges competing over time to earn their place in each waterfall.

205. Because non-Google exchanges often outperformed AdX on price, many publishers ranked those exchanges higher and treated AdX as a lower-priority exchange option to fill impressions not otherwise purchased by a higher-performing exchange. This meant that AdX did not have the opportunity to return bids for many publisher impressions.

206. In 2010, Google applied a new decisioning logic to DFP: a program it called Dynamic Allocation. Dynamic Allocation marked an end to DFP ad server order-routing impartiality. Under this program, Google used its DFP ad server dominance to impart a substantial new unearned and anticompetitive advantage to its own AdX exchange: a right of first refusal. Once a would-be winning buyer emerged through the waterfall system, Dynamic

Allocation gave AdX an opportunity to win that impression if it could beat the otherwise-winning exchange's advertiser's price by $0.01. Google's AdX was the only exchange with such a backdoor right of first refusal on publishers' inventory in DFP; Dynamic Allocation gave this right of first refusal only to AdX.

207. Dynamic Allocation foreclosed competition and exacerbated problems of adverse selection in the exchange market, permitting Google's AdX exchange to transact a large number of publishers' impressions—and the highest value impressions—at higher prices than those impressions would have traded at, absent Dynamic Allocation. Competing exchanges were left with lower-quality ad impressions passed on by AdX and deprived of liquidity. Despite entering a competitive market just a few years earlier, Dynamic Allocation propelled Google's AdX exchange to the top of the market by 2013.

208. Dynamic Allocation limited advertisers' ability to effectively use competing exchanges and ad servers, and drove up the overall costs of impressions borne by advertisers.

2. Enhanced Dynamic Allocation Harmed Competition in the Ad Exchange Market and Injured Advertisers.

209. Through a program introduced in 2014 that it called Enhanced Dynamic Allocation ("EDA"), Google devised a new way to use its ad serving monopoly to further repel competition in the exchange market. EDA drove up the prices of the most valuable impressions, causing advertisers to pay anticompetitive overcharges.

210. Like Dynamic Allocation, EDA was a new decisioning logic that Google applied to DFP. EDA had the purpose and effect of funneling an additional pool of publishers' inventory to AdX, and that new pool contained publishers' most high-value impressions (e.g., impressions displayed in the most prominent positions of a webpage, impressions targeted to users likely to make a purchase, etc.).

211. EDA brought guaranteed demand into the process. Guaranteed demand refers to high-value impressions for which publishers and advertisers negotiate directly. Google's EDA algorithms relied on average sales figures for these high-value impressions to make them available for sale through AdX at higher prices without putting publishers at risk of underdelivering their promised, guaranteed sales to the buyers who previously negotiated the guaranteed demand. Absent EDA, guaranteed impressions would have sold at prices lower than the prices they command through EDA.

212. Today, publishers have no choice but to leave EDA turned on in DFP; if a publisher turns off EDA, then AdX will not return live, competitive bids for their impressions.

213. Like Dynamic Allocation, EDA operated to cement Google's monopoly position in the ad exchange market and injured advertisers in the process. EDA further limited advertisers' ability to use competing exchanges and competing ad servers successfully, while driving up the costs of the most valuable impressions.

3. Project Bernanke Harmed Competition in the Market for Small Advertisers and Injured Advertisers.

214. In 2013, the employees of Google's gTrade group devised and launched a secret program, which they codenamed "Project Bernanke." Project Bernanke deceives publishers and advertisers and excludes competition in the exchange market and the market for buying tools for small advertisers.

215. Between 2010 and September 2019, Google publicly represented that AdX was a second-price auction. For example, shortly after launching its AdX exchange in 2009, Google executive Scott Spencer stated in an interview that "AdX is a second price auction with minimum CPMs set by the publisher. This is the most efficient auction model, resulting in the most stable, long-term equilibrium price." In their 2014 paper "Yield Optimization of Display

Advertising with Ad Exchange" (published in the *American Economic Review*), Google senior researchers Jon Feldman, Vahab Mirrokni, and S. Muthukrishnan similarly promoted AdX: "With multiple bidders, AdX runs a sealed bid second-price auction." Thus, in making bids and asks related to display-ad inventory, advertisers and publishers relied on Google's representation that when AdX ran an auction, the highest bidder would win and would pay the amount of the second-highest bid.

216. A general view of what an advertiser might see in a second-price auction is as follows: in the milliseconds after an ad impression becomes available, eligible bidders can respond to a "bid request" (which they had just received via an exchange) by returning a "bid response"; when they do this, they do not know the amount of any other bidders' bids—they submit what economists call a "sealed bid." If the two highest bids come in at $10 and $7, the advertiser with the $10 bid wins but pays only $7.

217. An additional characteristic of many types of auctions is a seller's ability to set a "price floor," i.e., the minimum amount the seller will accept to complete a sale. Price floors are commonly employed by publishers that sell programmatic display-ad inventory in exchanges. A publisher using DFP could seek to optimize its yield by setting different price floors for different exchanges. In a second-price auction, if only the highest bid exceeds the floor (with the second-highest bid falling below the floor), then the floor will serve as the second-highest bid, such that the winner will pay an amount equal to the floor. Continuing from the example above (where the two highest bids are $10 and $7), if the applicable floor price is $8, then the advertiser who bid $10 will win—but it will pay $8 (the floor) instead of $7 (the second-highest bid).

218. Google's secret Bernanke program surreptitiously switched AdX from a second-price auction to a third-price auction, from the publishers' standpoint, on billions of impressions

per month. Under Project Bernanke, the advertiser with the winning bid paid the price of the second-highest bid—but AdX also dropped or disregarded the second-place bid such the publisher received a payout equal to the *third*-highest bid or the publisher's floor, with Google pocketing the difference. Thus, advertisers paid Google—not publishers—an artificially inflation take rate, and in fact were paying more than the publisher would have been willing to accept.

219. Google moved the difference it retained as a result of this practice to a separate "pool," which it then used to inflate the bids of advertisers bidding through Google Ads to win more impressions for AdX that otherwise would have gone to advertisers bidding through non-Google buying tools. Google Ads won these auctions on AdX because Google could access bid information through its monopoly publisher ad server, and then inflate an advertiser's bid by drawing from funds that Google had secretly pooled from its Bernanke skimming practice.

220. Google invented Bernanke after observing Google Ads lose in AdX to competing buyers. According to Google, prior to Bernanke, advertisers bidding through non-Google buying tools were winning too often over advertisers bidding through Google Ads. An internal Google document from 2014 further states that the gTrade team was founded in late 2012 to devise "novel trading strategies" to increase Google's "win rate on AdX by +20 percent, reversing a worrisome 2013 trend" of non-Google buyers winning on AdX at Google's expense. Google's initial intent with Bernanke was to reverse this trend. But as the secret program continued to evolve, it morphed into a device to artificially boost the number of impressions transacted in AdX—a shift that necessarily came at the expense of competing exchanges and left advertisers with fewer alternatives to AdX. The Bernanke-inflated bids increased the number of impressions

transacted in AdX and permitted AdX to trade publishers' most valuable impressions while leaving mainly low-value impressions for rival exchanges.

221. Google developed three different versions of Bernanke, each of which varied how the program accumulated money in a Bernanke pool and spent those funds to inflate the bids of Google Ads advertisers. In each version, publishers were unwittingly paid amounts that reflected third-place bids rather than second-place bids while Google Ads continued to charge the winning advertiser as if it had won a second-price auction.

222. The first version of Bernanke designated the pool funds on a per-publisher basis, meaning that the funds retained by Bernanke were distributed in the form of inflated bids to the same publisher.

223. The second version of Bernanke, launched in May 2015 and called "Global Bernanke," created a "global" pool of funds that Google used to inflate Google Ads bids that fell below a publisher's floor price to drive more transactions to AdX. In other words, Global Bernanke dropped the second highest bids *across* publishers' auctions, pooled the resulting money extracted, then spent that money to inflate only the bids belonging to Google Ads advertisers who likely would have lost bids, resulting in non-AdX exchanges transacting impressions, because the bids were too close to the price floor a publisher set for AdX. Google applied Global Bernanke not only to the floors that publishers set in DFP but also to the floors Google set for itself by peeking at rivals' bids, e.g., through Dynamic Allocation and Enhanced Dynamic Allocation.

224. The third version of Bernanke, dubbed "Bell," penalized publishers that did not give AdX preferential access to their inventory through Dynamic Allocation. If a publisher did

not enable Dynamic Allocation, Bell diverted advertisers' funds away from that publisher and use the funds to inflate Google Ads bids for other publishers' inventory.

225. Google never disclosed any iteration of Bernanke. In all three variants, Google secretly diverted advertisers' funds to increase the win rate and volume of impressions delivered in AdX. All three variants allowed Google to cherry-pick more valuable impressions by inflating the bid price on high-quality impressions and leaving unwanted or low-value impressions for competing platforms, thereby impeding competition among the exchanges.

226. Bernanke harmed advertisers by causing them to pay the price of the actual second-highest bid instead of the third-highest bid, which was the bid that Google falsely reported as the second highest and paid to publishers (after extracting its supra-competitive fee). Bernanke also harmed advertisers by manipulating and inflating their bids. The small advertiser bidding through Google Ads wants their bids routed in a way that maximizes their return on investment. For instance, a local doctor might want her ads displayed on sites that are likely to lead to new patients by reaching a relevant audience (e.g., on medical websites). Bernanke could route the doctor's bids to less relevant sites and audiences (e.g., on sports websites), merely so AdX would prevail over other exchanges for the impression. In this way, Bernanke increased the cost of advertisers' campaign and lowered their return on investment.

227. Bernanke further harmed advertisers who used buying tools other than Google Ads by rendering those tools less effective on AdX.

228. Bernanke suppressed competition in the markets for ad exchanges and for ad-buying tools for small advertisers. As described above, Google successfully used Bernanke to manipulate ad auctions to give an unfair advantage to its own ad-buying tool, Google Ads. Rival ad-buying tools and exchanges could not effectively compete with Bernanke in place. The secret

program thwarted advertisers' ability to use competing ad-buying tools effectively, reduced advertisers' options, wedded them to Google, and drove up their costs associated with Google Ads and AdX.

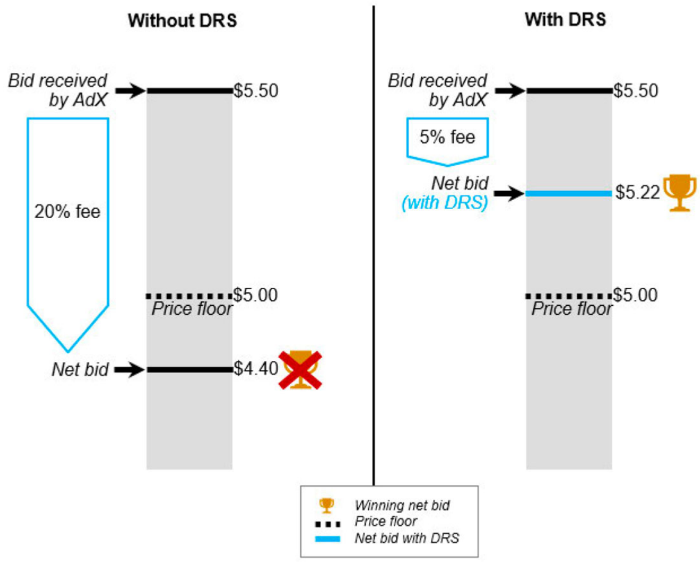
4. Dynamic Revenue Share (DRS) Harmed Competition in the Ad Exchange Market and Injured Advertisers.

229. In 2014, Google's gTrade group launched another program, codenamed Dynamic Revenue Share or DRS, that deceived advertisers and publishers and unlawfully foreclosed competition in the exchange market. As originally constructed, DRS dynamically adjusted Google's exchange fee on an impression-per-impression basis *after* soliciting bids in the auction to let Google's AdX exchange win impressions it would have otherwise lost.

230. If Google were operating a true second-price auction, AdX could only transact an impression where a bid cleared a publisher's pre-set floor *after* accounting for Google's exchange fee ("net bid"). For example, suppose a publisher set the floor for AdX to $10 for all bidders to improve inventory yield. Suppose the highest bid returned by an advertiser was $12. The advertiser bidding $12 could win if its net bid of $12 minus Google's exchange fee of approximately 20 percent, i.e., approximately $9.60, exceeded the price floor. Because a net bid of approximately $9.60 is lower than the publisher's $10 exchange floor, AdX could not transact the impression. The same advertiser would win the bid through an exchange charging a lower fee.

231. DRS manipulated Google's exchange fee *after* soliciting bids in the auction and *after* peeking at rival exchanges' bids to win impressions that Google otherwise would have lost. For example, with Dynamic Allocation, Google Ad Manager sent AdX a floor reflecting a rival exchange's historic average bid (e.g., $5). If AdX received bids of $4 and $5.50, DRS could lower Google's exchange fee on the top bid to 5 percent, to produce a net bid of approximately

$5.22 ($5.50 minus a 5 percent fee); assuming Google took a 20 percent fee, the net bid would have been $4.40 ($5.50 multiplied by 0.8). The manipulated net bid of approximately $5.22 becomes *higher* than the floor so AdX transacts the impression it would have otherwise lost.



232. In addition to lowering Google's exchange fee, DRS also secretly increased AdX's fee to well above 20 percent on impressions when one buyer bid significantly above the floor. On these impressions, advertisers paid an artificially inflated price to increase Google's take rate.

233. Dynamic Revenue Sharing thwarted advertisers' ability to use competing ad-buying tools effectively, reduced advertisers' options, wedded them to Google, and ultimately drove up their charges paid to Google. Dynamic Revenue Sharing further harmed advertisers because those that bid high above the floor should have paid the exchange floor determined at the auction's onset, not a higher floor that Google manipulated after the fact.

234. Advertisers overpaid as a result of Google's manipulation of publishers' price floors and were misled into believing that AdX functioned as a second-price auction, when in truth Google manipulated publishers' ad floors after the fact. Google internally acknowledged

that DRS made its auction untruthful: "One known issue with the current DRS is that it makes the auction untruthful as we determine the AdX revshare after seeing buyers' bids and use winner's bid to price itself (first-pricing)."

235. Google concealed DRS from both advertisers and publishers. Google started opting publishers into DRS starting in 2014 without disclosing anything about the program. By the fall of 2015, Google had opted all publishers into DRS, still without disclosing the program.

236. In the summer of 2016, without referring to the program's real name, Google told publishers it was launching a "revenue share-based optimization" that increased a publisher's yield. Google was referring to DRS, which in fact did not increase publisher yield.

237. Google continued to mislead advertisers and publishers about DRS and withheld critical information that advertisers and publishers could have used to make an informed decision about the program. Google did not disclose, for example, that it had been operating the program since 2014 or that DRS set floors *after* reviewing received bids. Peeking ahead at other exchanges' net bids, and then altering AdX's margin after reviewing its own received bids, permitted AdX to win when it should have lost based on publishers' inputs.

238. DRS was exclusionary and harmed competition in the exchange market. Manipulating floors and net bids *after* receiving bids based on a floor communicated in the bid request and *after* reviewing rival exchanges' net bids (which Google could do because of its monopoly ad server) prevented other exchanges from competing, including from competing on take rates. Only Google's exchange could set its take rate on an impression-basis *after reviewing* all of its rival's net bids. DRS enabled Google to avoid price competition without sacrificing market share, and to win impressions that it would otherwise have lost to lower-priced rivals. According to internal documents, turning on DRS gave AdX an additional $250 million per year

in transactions. Competing exchanges couldn't compete against Google's insider trading, and Google's deception precluded advertisers and publishers from making informed decisions and switching to a more trustworthy and transparent exchange. Advertisers could not adjust their bid strategy to acquire inventory at lower prices.

5. Google's Reserve Price Optimization Deceived and Injured Advertisers in the Ad Exchange Market.

239. Google falsely represented that it was running a sealed-bid, second-price auction, inducing advertisers to reveal their true value bids, then used those bids against advertisers to secretly manipulate exchange floor prices and increase the amount advertisers paid for impressions on AdX.

240. Ordinarily, in an online ad auction, a publisher may set a reserve price, or floor price, fixing the minimum bid required to win the ad placement. If none of the bids exceed this reserve price, the winning bidder must pay the reserve price.

241. In 2015, Google's "gTrade" group implemented Reserve Price Optimization ("RPO"), expressly to push up the auction closing price. Google falsely told publishers and advertisers that AdX operated a second-price auction. Sealed-bid, second-price auctions are designed to allow bidders to safely reveal their true value bids, i.e., the true maximum a bidder is willing to pay, without wasting time and resources trying to guess what others will bid, and without having their true maximum number used against them by sellers, including in future auctions.

242. Under RPO, once advertisers had revealed their true value bids, Google secretly, and unilaterally, overrode publisher floor prices and set customized floor prices based on advertisers' historical bids. Suppose, for example, a publisher using the AdX exchange set a $5 reserve floor price for an impression directed at Consumer Z; and suppose Advertiser A bids $10

for that impression, Advertiser B bids $7, and Advertiser C bids $6. In an honest second-price auction, Advertiser A should win the impression at the amount of the second-highest bid, or $7. Google told publishers and advertisers its auctions worked in this manner. But under RPO, in the next auction for an impression targeted at Consumer Z, Google would use an advertiser's former true value bids against them. In the next auction, RPO would secretly override the $5 floor pre-set by the publisher and, instead, send Advertisers A, B and C a floor of $9.95, $6.95, and $5.95, respectively. These custom floors were based on each specific advertiser's bid history for Consumer Z's impressions. In this scenario, the advertiser with the highest bid still wins the impression—but instead of paying the $7 owed under the rules of an honest second-price auction, Advertiser A would pay $9.75. The higher price is not generated by any activity from publishers or competing bidders, but, rather, by Google overriding the publisher's preset price floor and using advertisers' confidential information to their detriment.

243. When buyers think they are paying X, when the seller actually is extracting X plus Y—with Y being the difference between the second price and the actual price charged—the buyers cannot accurately compare the options available across the exchange market. As a result, a rival exchange could be charging X, or X plus a fraction of Y, and still lose to Google. Thus, Google's extraction of a hidden premium gave it a competitive advantage in the exchange market.

244. To determine the maximum a given advertiser would pay for an impression, RPO relied on inside information, provided in confidence and under false pretenses to Google's allegedly second-price exchange: advertisers' historic, true value bids. Google employees privately acknowledged that RPO should be based on "smarts and tech" rather than such "insider

information." Google carried out this deception secretly and unilaterally, by reference to user IDs derived from Google's publisher ad server and bid history data from Google's AdX.

245. Internal documents demonstrate Google was fully aware that RPO was misleading and driving up prices paid by advertisers. In one internal email exchange discussing RPO, a Google employee asked: "Doesn't that undermine the whole idea of second price auctions? I.e., the assurance that you can bid the maximum you're willing to pay with no negative consequence. But if the publisher manufactures a floor based on your bid to get you to pay more than the second price, this principle gets violated." Another Google employee wondered: "Is RPO not just basically pushing our second price auction—that is supposed to be fair—toward a first priced auction?"

246. Google launched RPO in early 2015, automatically subjecting advertisers and publishers to the program without their knowledge or consent. Google publicly denied plans to use such dynamic floors in its exchange. In response to a March 5, 2015, Digiday story based on leaked information that Google was planning to begin using dynamic price floors, Google spokeswoman Andrea Faville said: "That description doesn't match anything in our current product suite or future roadmap." But in fact, at that time, Google's plans to launch RPO were well underway. Google had applied RPO to 10 percent of publishers by March 27, to 50 percent of publishers by April 7, and to all or most publishers by April 17.

247. At no point did Google correct its false statement that had no plans to use dynamic price floors. Instead, after deploying RPO, Google dissembled by encouraging publishers to adjust their exchange floors, *knowing RPO would override* these floors. Documents show that when Google internally considered being more transparent, it rejected disclosing RPO in favor of secrecy (at least until someone noticed).

248. Not until over a year after starting RPO, on May 12, 2016, did Google announce it was launching "optimized pricing." Google did not disclose that RPO had been running for over a year or that it relied on inside information, and misled publishers and advertisers as to how the program worked. When approached by advertisers, Google told them that RPO was in their best interest. In one blog post disclosing RPO, Google assured advertisers that "optimized pricing" would provide a great return on their investment and open access to premium inventory. Google also falsely informed larger buyers that the dynamic pricing floors worked to their advantage even though they operated to drive prices up much closer to advertisers' maximum willingness to pay. Internally, Google employees repeatedly acknowledged that RPO did not help advertisers in any way and that it in fact extracted extra money from advertisers. Google followed an outward-facing policy of silence on RPO except when pressed by advertisers.

249. Even after Google's overdue, partial, and misleading disclosures regarding "optimized pricing," Google led advertisers to believe that it was running an honest second-price auction, inducing them to continue submitting their true value bids—which Google continued to exploit against them dishonestly. Internally, Google employees expressed concern about the continuing lack of transparency concerning RPO and concern that suspicious buyers bearing higher costs would learn RPO was systematically raising the prices for ad placements.

250. Neither advertisers nor publishers participating in the AdX exchange could opt out of RPO.

251. Finally, in 2019, Google decided to drop any pretense of running a second-price auction and officially migrate to a first-price auction system. Even so, a form of RPO continues under codename "Bulbasaur." Internal documents reveal Google's view that because buyers now pay what they bid, Google needs to find other ways to increase income.

252. RPO impacted billions of impressions transacted by Google's exchange. In an experiment measuring RPO's effect on exchange competition, Google found that RPO netted the company an additional $250 million in annual, recurring revenue.

253. Google's RPO program has caused advertisers to suffer substantial harm in the form of artificially increased prices, and prevented rival exchanges from competing on the merits, as a direct result of Google's misleading, predatory conduct.

6. Google's Unified Pricing Rules Harmed Competition in the Ad Exchange Market and the Markets for Ad-Buying Tools for Small and Large Advertisers, and Injured Advertisers.

254. Through its DFP ad server, Google unlawfully forecloses competition in the exchange market and buying tool markets through Unified Pricing Rules first imposed on publishers in 2019.

255. Historically, publishers set different price floors for different exchanges and different buyers in the publisher ad server. Large publishers often invested considerable resources in fine-tuning and managing hundreds upon hundreds of different floors for various buyers and exchanges.

256. Publishers undertook this effort to increase revenue and improve the quality of ads returned to their site. Relative to its competitors, AdX and Google's buying tools have substantial information advantages concerning publishers' heterogenous ad inventory. Setting different price floors for AdX and Google's buying tools enabled publishers to mitigate adverse selection problems caused by Google, thereby encouraging exchange and buyer participation (including those engaged in header bidding) and increasing overall yield. Publishers also set different floors for Google's exchange and buying tools to diversify the sources of demand for their inventory. By ensuring that rival exchanges and buying tools had a meaningful opportunity to return live, competitive bids, publishers were able to reduce their reliance on Google, promote

competition from header bidding, and increase yield. Publishers also set different price floors for AdX and Google's buying tools to improve the quality of the ads returned to their site and displayed to consumers. Publishers therefore used price floors to optimize decision-making to obtain the best yield possible while protecting their content from low-quality ads.

257. Google observed that the differing floors that publishers routinely set for AdX and Google buying tools were an impediment to Google increasing its market share in the exchange and buying tool markets. Google's intent in imposing Unified Pricing floors was to foreclose competition by preventing cost savings on other exchanges and shifting transactions to AdX. Thus, publishers' use of floors to find more economical alternatives to Google's exchange became something Google needed to "fix": "We should look at all real issues that we are aware of which incentivizes publishers to use other platforms (header bidding and pricing floors cutting off access etc.) that we should try to fix as soon as possible." Rather than improve the quality of ads returned by AdX and Google Ads, reduce its exchange take rate, or stop interfering with publishers' ability to share information about their heterogeneous inventory, Google chose to cut off publishers' ability to set differential floors.

258. Through Unified Pricing Rules, presented as a condition of publishers' continued use of Google's monopoly ad server (DFP), DFP cut off publishers' ability to set different floors for different exchanges and buyers—publishers must set the same price floor for different exchanges and the same price floor for different buyers. Google accomplished this change by exercising its discretion under its agreements with publishers to change the mandatory user interface within DFP. Participating publishers agreed and assented to the change by continuing to use DFP. Google's written agreements for DFP customers also provide, explicitly or implicitly, that the publisher agrees to Google's rules and restrictions applicable to DFP.

259. Google's Unified Pricing Rules ensure that rival exchanges and buying tools are at a price disadvantage. Because Google's publisher ad server imposes extra fees to serve ad inventory sold on non-Google exchanges, Google's exchange can win an impression by returning a bid 5 to 10 percent lower than a rival exchange. Thus, instead of a level playing field, Google's price-parity rules guarantee that Google's exchange has a pricing *advantage* to win a publisher's impression. For example, if a publisher sets a $10 floor, an advertiser bidding through Google's exchange can win that impression so long as its bid, after Google takes its cut, is at least $10. An advertiser bidding through a non-Google exchange can win the impression only if its bid, after paying the non-Google exchange fee, is at least $10.53 ($10.53 minus Google's five-percent Exchange Bidding fee = $10).

260. Google's Unified Pricing rules interfere with a publisher's ability to set prices in transactions in which Google has no interest as a buyer. Google's Unified Pricing Rules are imposed by Google's publisher ad server, and not by Google's exchange or buying tools. Therefore, publishers are restricted from setting exchange-specific or buyer-specific price floors whether or not Google's buying tools or exchange participate in the auction. Thus, even when Google is not an auction participant, publishers are still prohibited from making tradeoffs between price and quality or otherwise increasing yield from non-Google buying tools and exchanges by setting different floors.

261. In the past, Google had not impeded the setting of variable price floors for different sources of demand, so long as Google was in control. With its Reserve Price Optimization (RPO) program, however, Google itself began secretly manipulating publishers' price floors.

262. Unified Pricing Rules disrupt publishers' routine use of floors to increase competition and yield. For example, one large publisher invested significant resources in developing and testing machine-learning algorithms that set a higher floor price for Google's AdX on a per-impression basis. The publisher applied those floors to mitigate the effect of Google's blocking rival exchanges from accessing impression information. Tests run by this large publisher showed that the ability to mitigate Google's information advantage through differential floors generated an 11 percent revenue gain for the publisher.

263. Given the monopoly position Google commands in publisher ad serving, and the high barriers to entry and high switching costs, publishers already have very little ability to substitute with rival ad servers. This didn't stop Google from deceiving publishers about the negative impacts of Unified Pricing Rules. Google misrepresented to publishers the reasons for adopting Unified Pricing and the effects of Unified Pricing for publishers. Externally, Google represented that eliminating differential price floors benefited publishers, but privately, Google recognized that Unified Pricing was "extremely self-serving."

264. Google's Unified Pricing Rules, enforced through combinations with publishers, foreclose competition in the exchange and ad-buying tool markets. For instance, a review of a publisher's auction records reveals that AdX drastically grew its share of impressions as a result of Unified Pricing restrictions. Unified Pricing resulted in AdX winning nearly *double* the number of impressions it used to—but paying roughly *half* as much. Records from one large publisher also show that Unified Pricing Rules resulted in Google's ad-buying tools tripling and quintupling the share of impressions they win.

265. Unified Pricing Rules also result in AdX winning more because they coerce publishers to transact with Google ad-buying tools *in* AdX. Previously, publishers could choose

to transact with DV360 only in non-Google exchanges by increasing DV360's price floors in AdX. Unified Pricing ended this practice and caused publishers to transact with DV360 and Google Ads exclusively in AdX.

266. These uniform pricing restrictions imposed upon publishers, together with the fees that Google imposes for transactions that occur off its exchange, impede the ability of competing exchanges to deliver impressions at lower prices. Similarly, barring publishers from setting different floors for different ad buyers reduced competition between ad-buying tools, resulting in publishers transacting a higher volume of impressions with Google ad-buying tools. Advertisers were harmed because the higher volume of commerce on Google's exchange and through its ad-buying tools that resulted from these restraints reduced their choices in the ad-buying tool and exchange markets and caused them to pay more to place ads through Google.

7. Project Poirot and Project Elmo Harmed Competition in the Ad Exchange Market and the Market for Ad-Buying Tools for Large Advertisers, and Injured Advertisers.

267. "[T]o combat the effects of header bidding," Google's gTrade cohort first devised project Poirot, which was initially designed to identify when a rival exchange was not running a true second-price auction. The algorithm relied on inputs from DV360's own bid data to detect and quantify any deviations from second-price auctions. Once detected, Poirot would typically adjust DV360's bid to avoid overpaying for an impression or providing the rival exchange with meaningful data about DV360's willingness to pay. Although DV360 was openly critical of "greedy" rival exchanges that claimed to run a true second-price auction while actually running a "dirty" second-price auction, Google's own exchange was engaging in the very same auction manipulation, though Reserve Price Optimization, discussed above.

268. Thus, DV360 intentionally bid less on rival exchanges and increased bids on its own ad exchange, ostensibly to avoid optimizations that were bad for advertisers, when DV360

was actually redirecting that ad spend to a marketplace that engaged in exactly the same behavior. In reality, therefore, Google's efforts to "protect" advertisers were a direct reallocation of advertising dollars to Google's own ad exchange with no actual benefit to advertisers.

269. Initial experiments regarding the effect of Poirot showed a negative revenue impact to DV360, but Google's main goal was depriving rival exchanges of sufficient scale engaged in header bidding to compete with Google's ad exchange: "Non-second price exchanges will see a revenue drop in the range of 20-30% … Overall [DV360] revenue impact is -1.9%."

270. Google later extended Poirot to optimize bidding in first-price auctions like those used by header-bidding exchanges. As one Google employee noted, "Our response to [header bidding] has been a multi-pronged effort, which includes … First-Price Auction Defenses in [DV360] (since all [header bidding] is transacted through first-price auctions)." Google found that this expansion of Poirot succeeded: "Poirot has actually been quite effective, resulting in "[DV360] spending 7% more on AdX and reducing spend on most other exchanges."

271. Elmo, another gTrade project designed to "protec[t] against header bidding," is a mechanism that reallocated ad spend away from rival exchanges engaged in header bidding. Header bidding increased competition by routing a bid request across multiple exchanges. Google devised Project Elmo to help DV360 identify when it saw the same bid request across multiple exchanges, and it decreased overall ad spend on any exchange that it suspected meaningfully engaged in header bidding.

272. Like Poirot, Elmo succeeded in its aims. By March 2018, Elmo had decreased DV360 ad spend on the largest user of header bidding by 25 percent, while also generating at least an additional 7.8 percent increase of DV360's spend on Google's ad exchange, or $220

million. Just four months later, one internal Google document shows, Elmo had accomplished a reduction of 44 percent in ad spend across major rival exchanges overall.

273. Taken together, Poirot, Elmo, and other strategies to reduce spend on rival exchanges reflect Google's campaign to illegitimately undermine the success of header bidding and starve rival exchanges of their primary source of demand. According to one Google employee, the combined impact of these programs was on average a 21 percent revenue decrease on affected exchanges and a 16 percent increase in revenue ($300 million) for Google's ad exchange, despite disadvantages on cost and quality.

274. Google's Poirot and Elmo initiatives harmed competition in the ad-exchange market and the market for ad tools for large advertisers by obtaining information about rival exchanges, locking advertisers into using DV360, and directing ad spending away from rival exchanges and toward AdX, all without competing on the merits of price or quality.

8. Google's Imposition of Line-Item Caps and Redaction of Auction Data Harmed Competition in the Exchange Market and Injured Advertisers.

275. Beginning in 2018, Google implemented a variety of changes in order to limit information publishers could access regarding the performance of rival exchanges. These changes made it more difficult for publishers to determine if using Google's newly developed Exchange Bidding would yield higher profits than exchanges that interfaced with header bidding.

276. First, Google stopped providing two key data fields in the auction records it provided to publishers: KeyPart and TimeUsec2. KeyPart designates the number of ad impressions and TimeUsec2 measures the length of time of the ad impression. Analyzing these data fields allowed publishers to evaluate how exchanges in header bidding performed compared to exchanges going through Exchange Bidding. When Google redacted these data fields, it eliminated publishers' ability to compare the performance of exchange and header bidding. This

frustrated publishers' ability to use header bidding and thus inhibited competition from header bidding.

277. Second, Google began splitting its bid-level and impression-level data, making it impossible for publishers to fully track auction results. Bid-level data gives publishers information concerning the bids submitted for particular impressions. Impression-level data informs the publisher which source won each impression. By splitting these data into distinct subsets, Google prevents its publisher customers from seeing if the highest bidder won.

278. These actions, implemented only after Google faced competition from header bidding, had no legitimate business purpose and were undertaken to repel competition from header bidding.

279. Moreover, Google limits publishers' ability to receive bids through header bidding by artificially capping publishers use of "line items"—an aspect of DFP that publishers must use to receive bids from exchanges in header bidding. Google exercises its discretion under its agreements with publishers to impose these limits through code embedded in the mandatory user interface within DFP. Participating publishers agreed and assented to the limits by continuing to use DFP. Google's written agreements for DFP customers also provide, explicitly or implicitly, that the publisher agrees to Google's rules and restrictions applicable to DFP.

280. DFP induces publishers to match, to the penny, a bid received from a header-bidding exchange (e.g., $3.98) with a price corresponding exactly to a pre-existing ad server line item (e.g., a line item with a price of $3.98). If a publisher has a pre-existing line item with a price of $3.90, but it receives a header-bidding exchange bid of $3.98, the publisher's Google ad server rounds down the header bidding bid to the line item with the next closest price, e.g., to the line item with the price of $3.90. Consequently, the publisher must create a large number of line

items (e.g., line items with corresponding prices of $3.90, $3.91, $3.92, $3.93, $3.94, $3.95, $3.96, $3.97, $3.98, and $3.99) to capture a live, competitive bid from a header-bidding exchange.

281. The need to create many line items when interacting with header bidding is problematic because, to foreclose competition from header bidding, Google imposes restrictions on publishers that limit the number of line items a publisher may list. Google's documents confirm that its intent in imposing these artificial line-item caps was to deploy a "tool we have to fight [header bidding]." When publishers requested that Google increase the number of permissible line items so that they could use header bidding to capture authentic bids, Google rejected their requests or provided only temporary, limited increases.

282. Instead of increasing line items to enhance publisher clients' yields, Google's DFP undercuts their profits and harms advertisers. Fewer line items cause publishers' bids from header-bidding exchanges to be rounded down more often. As a result, the bids from header-bidding exchanges are generally *lower* than the bids from Google's exchange, including because the former are not subject to Exchange Bidding's additional fee. Thus, advertisers paid more for impressions as Exchange Bidding took market share from Header Bidding, a shift that resulted in part from Google's line-item caps.

283. Google's documents confirm that it limited the number of line items publishers could use, even though DFP could allow for a greater number to be implemented, to pressure publishers to switch to Exchange Bidding, known internally as Jedi. As one employee explained to others, "[w]e need to push these pubs to using Jedi – if imposing more limits pushes them more to Jedi – then we should keep those limits in place." Hence Google continued to enforce its restriction on publisher line items.

284. In a competitive market, an ad server would help publishers use header bidding to *increase* publishers' yield. In fact, this is precisely what the OpenX ad server did when it incorporated header bidding through a single line item, eliminating the need for the multiple line-item set-up. Yet, because of Google's anticompetitive restrictions, most publishers were locked in to using Google's monopoly ad server and could not easily switch. With competition stifled in these interlocking markets, OpenX's ad server was unable to gain share against Google's monopoly and exited the market in 2019.

C. Google's Network Bidding Agreement with Meta and Its Imposition on Publishers of Uniform Pricing Rules and Line-Item Caps Unreasonably Restrain Trade.

285. The NBA between defendants Google and Meta restrains trade in the final clearinghouse auctions for web and in-app impressions performed by Google in its Open Bidding and AdMob final auctions and is anticompetitive. Google's agreements imposing Unified Pricing Rules on publishers restrain trade in the ad-exchange market and the markets for ad-buying tools for large and small advertisers by precluding publishers from setting different price floors for different, competing exchanges and ad-buying tools. Google also restrains trade in the exchange market with its agreements imposed on publishers that cap the number of line items they can use on header bidding.

1. The Network Bidding Agreement Places All Other Bidders Transacting Bids Through Google's Open Bidding and Final In-App Auctions at a Competitive Disadvantage.

286. The Defendants' NBA (referred to internally as "Jedi Blue") became effective in September 2018 (Doc. 221-1). Under the agreement, Meta agreed to send a minimum volume of winning bid responses through Google's Open Bidding and AdMob auctions (referred to collectively as "Final Clearinghouse Auctions," NBA, ¶ 1.28). Meta received enhanced and

proprietary data known only to Google which was not supplied to other bidders in its auctions (NBA, Ex. E).

287. Google agreed to use "reasonable efforts" to ensure that Meta would be able to identify the user on a minimum of 80% of the bid requests sent by Google to Meta from mobile apps and at least 60% of the bid requests sent by Google to Meta from websites on browsers that allow cookies (NBA, Ex. A, ¶ 3). Bid requests from identified users are more valuable to advertisers because identifying the user allows for more accurate targeting and reduces the chances of serving an ad to a "bot." Meta agreed to bid on 90% of the bid requests in which the end user was identified (NBA, Ex. A, ¶ 4), and to commit to a minimum annual spend (NBA, Ex. B, ¶¶ 2-4) and auction win-rate (NBA, Ex. A, ¶ 5).

288. Google also allowed Meta to respond to requests beyond the 160-millisecond timeout afforded to other Open Bidding bidders, giving Meta additional time to evaluate the bid request and submit a bid.

289. Google's commitment under its agreement to weed out a large majority of bid requests for which Meta cannot identify the end user, and Meta's enlarged timeout allowance, distort competition in the Final Clearinghouse Auctions by placing advertisers bidding against Meta at an informational and procedural disadvantage.

290. Although the NBA contains terms governing the fees to be paid by Meta to Google for Google's auction services, the terms in the NBA that restrain trade are those governing the horizontal relationship between Meta's MAN and the competing advertiser intermediaries against whom MAN bids at auction. Meta offers its open display and in-app advertising services in order to monetize its enormous database of information on millions of its customers, and the proprietary and confidential data, including match information, provided by

Google helps Meta do this. Other demand-side intermediaries also seek to assist publishers in monetizing their customer information by identifying end users—but they must bid against Meta without the benefit of the match-rate assurances and confidential end-user data that Google furnishes Meta under the NBA or the additional time to bid that Google allows Meta in practice.

291. The terms of the NBA that harm competition are not similar or analogous to discounts or allowances a seller might provide to a favored customer, because the economic value of those terms cannot be replicated by a payment from Google to Meta. The competition-distorting benefits enjoyed by Meta can only be granted by disadvantaging Meta's rival bidders in Google's auctions relative to Meta. Google does not itself pay for these benefits, but instead extracts them from Meta's competing bidders by impairing their position relative to Meta. Google must make competing bidders worse off in order to provide Meta with the informational advantages required by the NBA.

292. Google and Meta tightly controlled and coordinated information about the NBA, which contains strict confidentiality provisions. Bidders in Google's final ad auctions had no knowledge of the superior information that Google secretly provided to Meta. Possessing undisclosed information relevant to the advertising opportunity, Meta enjoyed a competitive advantage over other bidders for open display space. Meta's superior information, match rates, and lengthened timeouts inflated the bids for Meta's rivals to win in Google's auctions above what those bids would have been had Meta not had access to such superior information or been offered these secret advantages.

293. The Defendants' agreement also sets forth mutual commitments to "cooperate and assist" one another in the event of any antitrust investigation related to their agreement, in which the word "antitrust" is mentioned no fewer than 20 times.

294. As the agreement itself indicates, the market in which the NBA unreasonably restrains trade is the market for open display and in-app ad inventory traded in Google's Final Clearinghouse Auctions, in which Meta competes with other demand-side intermediaries for publishers' and developers' inventory.

2. Google Combined with Publishers to Reduce Competition with Unified Pricing Rules and Line-Item Caps.

295. As discussed above, the Unified Pricing Rules that Google imposed on publishers as a condition of their use of DFP prevents them from setting different price floors for different exchanges and ad-buying tools. In its Answer in *State of Texas v. Google LLC*, No. 4:20-cv-00957-SDJ, Doc. 67, ¶ 230 (E.D. Tex. Feb. 22, 2021), Google "admit[ted] that, as a result of the unified pricing rules, publishers can no longer set different floors for different buyers in Google Ad Manager's unified auction, including exchanges participating via Open Bidding, when bidding on the same inventory on behalf of the same advertiser; that a publisher can no longer use Google Ad Manager to set different price floors for two bidders in the same auction (e.g., Google Ads and The Trade Desk) if they are bidding on behalf of the same advertiser[.]" These restrictions have prevented publishers from routing their ad space to another exchange at a price floor lower than the floor they give to Google's exchange. Nor can a publisher give one bidder a lower price floor than it gives to another bidder. Google's unlawful agreements also impose a 5 to 10 percent fee for transactions that clear on other exchanges. Google thereby both profits on trades outside its system and handicaps the competition that clears those trades.

296. Google also imposed restrictions on publishers that capped the number of line items they could use on header bidding. In its Answer in *State of Texas v. Google LLC*, No. 4:20-cv-00957-SDJ, Doc. 67, ¶ 205 (E.D. Tex. Feb. 22, 2021), Google admitted that its "ad server has limited the total number of line items that a publisher can create" as a condition of

continued DFP use. Fewer line items cause publishers' bids from header bidding exchanges to be rounded down more often, with the result that bids from header-bidding exchanges are less competitive compared to the bids from Google's. Due to these restraints, therefore, a substantial percentage of auction transactions for ad impressions shifted to Google platforms.

VII. INTERSTATE TRADE AND COMMERCE

297. Google's conduct as alleged herein has had a substantial effect on interstate and intrastate commerce.

298. At all material times, Google participated in the marketing, promotion, distribution, and sale of publication and advertising services for display advertisements in a continuous and uninterrupted flow of commerce across state and national lines and throughout the United States.

299. Google's conduct also had substantial intrastate effects in that, among other things, Google's publication and advertising services for display advertisements were sold in each state, including California. At least thousands of individuals in each state, including California, were impacted by Google's anticompetitive conduct. As alleged below, absent Google's unlawful conduct, Plaintiffs and class members within each state would have paid less or received more money for digital advertising services.

VIII. ANTITRUST IMPACT

300. Google's conduct set forth herein had the purpose and effect of excluding competition in the relevant markets for ad exchanges, ad-buying tools for small advertisers and ad-buying tools for large advertisers. Absent Google's conduct, each of these markets would have been significantly more competitive and class members would have financially benefited from that increased competition.

301. Google's anticompetitive conduct and its monopoly and market power has caused ongoing and durable harm to competition in the markets for ad exchanges, ad-buying tools for small advertisers, and ad-buying tools for large advertisers. Google's monopoly and market power has enabled it to raise its prices above the competitive level to advertisers and, in turn, pay lower than competitive prices to publishers. Google has extracted monopoly rents in the form of fees it does not fairly disclose to other market participants.

302. Advertisers have suffered harm by paying higher prices due to Google's display advertising monopolies. During the class period, increases in the prices paid by advertisers to place online display ads have outpaced the rate of inflation as a result of Google's ability to charge supra-competitive prices free from any realistic competitive threat.

303. The investigation conducted by the House Subcommittee on Antitrust, Commercial, and Administrative Law revealed that many companies pay Google most of their online ad expenditures. For example, one major company paid well over half of its total ad spend to Google each year from 2016 to 2019, with the second top provider receiving less than 15%.

304. A 2018 study by eMarketer, which focused on programmatically purchased ads across the open internet, found that programmatic ad prices have risen meaningfully across all major display categories: desktop, mobile, mobile app, and video. In 2018, the average digital advertisement sold for 12% more than it did in 2016, an increase approximately five times the prevailing rate of inflation. These price increases resulted in substantial part from Google's anticompetitive conduct in the relevant markets and Google's price increases for those services. These price increases were largely borne by advertisers who paid Google for those services to broker the placement of their display ads.

305. *Bloomberg* also reported that as of 2019, Google had increased the price of search ads by about 5% annually, a rate more than three times greater than the 1.6% inflation rate during the same time period. Likewise, Google's power in the relevant markets here enabled it to raise the prices of its brokering services to supra-competitive levels. The higher prices have increased Google's profits, but advertisers now receive less for each dollar they spend, with trading costs now accounting for half the cost of every trade on average.

306. A substantial portion of Google's trading fees are monopoly rents. Competitive market conditions would serve to reduce these fees.

307. Advertisers have seen progressively lower returns on their digital advertising investments as Google built and reinforced its monopoly in the relevant markets. And publishers have lost ad revenue because Google's entrenched monopoly has enabled it to take a comparatively larger portion of advertisers' payments for the placement of ads. There are no offsetting benefits to publishers that would negate the harm to advertisers from Google's anticompetitive conduct.

308. As a result of its digital advertising monopolies, Google has consistently reaped profits at margins greater than 20%—almost three times more than the average profit margin for an American business. Financial analysts predict that Google is well positioned to maintain its dominance in digital advertising, noting that "Alphabet has established unusually deep competitive moats around its business."

309. Google has foreclosed competition in the ad exchange market by blocking competition between exchanges and advantaging its exchange through processes like Dynamic Allocation and Enhanced Dynamic Allocation in its ad server; manipulating exchange auctions through secret programs like DRS and Bernanke; and preventing publishers from setting

different price floors for different exchanges through imposition of Unified Pricing Rules. This exclusionary conduct harmed competition in the exchange market and harmed advertisers.

310. Google's exclusionary conduct has allowed it to charge a supra-competitive take rate in the exchange market, which is borne in part by advertisers. While Google's exchange competitors have lowered their take rates in response to competitive pressure, Google has maintained or increased its take rate over time. For example, in 2017, Google observed internally that market forces, including the advent of header bidding, were putting pressure on take rates in the exchange. In response to these market forces, Google's competitors lowered their exchange rates, with some of its competitors lowering their prices to 25 percent of what Google charged. Google, in contrast, *increased* its exchange take rate from 20 percent in 2017 to 22 percent in 2019 for third-party buyers buying through its exchange. Today, Google continues to charge a supra-competitive take rate, while the prices charged by Google's closest exchange competitors are considerably lower: from 5 to 15 percent.

311. Google's exclusionary conduct has also harmed quality in the exchange market. Google has created information asymmetries that exacerbate problems of adverse selection in the exchange market, allowing Google's exchange to win more high-value impressions and significantly lowering the quality of matches that competing exchanges can provide as compared to Google's exchange. This conduct harmed competition in the exchange market since rival exchanges were limited in their ability to compete on the quality of the matches provided. Google's exclusionary conduct has also caused competing exchanges to exit the market. Over ten years ago, Microsoft, Yahoo!, and top Silicon Valley venture funds competed in the exchange market, with the AdECN, AdBrite, and ADSDAQ exchanges; all three of these

exchanges have since exited the market. The few remaining exchanges have been unable to compete with Google.

312. Competition from new entrants has been weak because of the barriers to entry Google has created. For instance, Google has created an enormous barrier to entry by preventing small advertisers using Google's ad-buying tool from submitting live, competitive bids in non-Google exchanges, thereby eliminating a large source of demand from other exchanges and inhibiting potential new entrants from obtaining the scale necessary to successfully compete with Google. Competing exchanges have sought to compete for market share by lowering their take rates to 25 percent of Google's exchange take rates. But, because Google has obstructed competition, lowering prices does not permit rival exchanges to gain market share. In recent years, Google's anticompetitive conduct has significantly increased Google's market share without any decrease in its take rate.

313. Google's exclusionary conduct has resulted in harm to innovation. For many years, DFP depressed publishers' inventory yields by blocking real-time competition from non-Google exchanges. When publishers found a way to work around the restrictions imposed by DFP using header bidding, an innovative technology that promoted competition between exchanges, publishers' yields increased by over 30 percent, sometimes even over 100 percent. Rather than competing on the merits of its exchange and ad server, Google schemed to "kill" header bidding. This scheme was successful and substantially rolled back adoption and growth of header bidding while AdX continued to gain market share.

314. Google's harm to the competitive process has harmed advertisers. Because of Google's exclusionary conduct, advertisers are significantly less able to identify the user associated with an impression when transacting through a competing exchange with respect to

transacting through Google's exchange and are thus forced to transact more on Google's exchange with a higher take rate. In a competitive market, advertisers and publishers would benefit from exchanges competing on take rates and quality and from innovation that promotes exchange competition. Competition would produce lower take rates, benefiting advertisers. Advertisers would pay less to purchase ad space, permitting them to re-invest those cost savings into providing consumers with higher-quality and lower-priced goods and services. Google's foreclosure of competition in the exchange market has permitted its exchange to charge supra-competitive take rate (at least 19 to 22 percent on gross transactions) and provide lower-quality, sub-competitive brokering products. Google's anticompetitive and deceptive acts and practices have consequently reduced output in the exchange market.

315. Google's exclusionary conduct has foreclosed competition in both the market for ad-buying tools for small advertisers and the market for ad-buying tools for large advertisers. Google's exclusionary conduct in these markets includes advantaging its own buying tools through processes like Dynamic Allocation and Enhanced Dynamic Allocation in its ad server, and imposing Unified Pricing agreements on publishers. Google's exclusionary conduct of manipulating advertiser bids in exchange auctions through the Bernanke program harmed competition in the market for buying tools for small advertisers and thereby harmed small advertisers.

316. Google's exclusionary conduct has lowered the quality of its ad-buying tools. Google even internally admitted to "artificially handicapping" Google Ads (its buying tool for small advertisers) by preventing small advertisers from submitting live, competitive bids on any exchange other than Google's AdX exchange so that these small advertisers would then "boost

the attractiveness" of AdX to publishers. In a competitive market, ad-buying tools would compete on quality and allow advertisers to bid in multiple exchanges.

317. Google's exclusionary conduct has created barriers to entry, inhibiting competition from potential new entrants to the ad-buying tool markets. Large technology companies like Microsoft and Facebook have considered but decided against entering the market for display advertiser buying tools.

318. Google's harm to the competitive process has harmed both small and large advertisers. In a competitive market, advertisers would benefit from ad-buying tools competing on price and quality (e.g., the extent to which the tools maximize advertisers' best interests). Google's exclusionary conduct has permitted its ad-buying tool for small advertisers to charge supra-competitive fees and decrease quality below competitive levels (e.g., charging non-transparent fees, manipulating advertisers' bids to purchase ad space for higher prices trading on AdX, and arbitraging small advertisers' bids to extract higher fees). Similarly, Google's exclusionary conduct has permitted Google's ad-buying tool for large advertisers to charge supra-competitive fees and decrease quality below competitive levels (e.g., the failure to adequately audit Google's conflicts of interests and serving of fraudulent impressions). Google's conduct has consequently also lowered output in these markets.

319. Google's harm to the competitive process in the ad-buying tool markets has also harmed advertisers' customers—American citizens. The fees that advertisers would save on ad-buying tools and ad purchases in the absence of Google's anticompetitive conduct would result in reduced costs that advertisers would ultimately pass on to consumers. Consumers would benefit through better-quality, lower-priced goods and services. Advertising also allows consumers to learn of the range of competitors in a market, their prices, and the nature of the

products and services offered. When advertising effectiveness is reduced, competition between products and services is reduced, and consumers are harmed.

320. A competitive marketplace would benefit both advertisers and the public. In a competitive market, advertisers would pay less to have their ads placed, publishers would receive more for placing the ads on their websites, and the public would pay lower prices as well as benefiting from innovations in digital advertising. But with Google stifling competition and extracting monopoly rents as the dominant intermediary, both advertisers and publishers lost (and lose) money. The absence of competition that has resulted from Google's conduct has caused Plaintiffs and class members to lose money or property because they have been required to pay more than they otherwise would have paid for digital display advertisements.

IX. TOLLING OF THE STATUTE OF LIMITATIONS

A. Google's Conduct Constitutes Continuing Violations of the Antitrust Laws and Tolls the Statute of Limitations.

321. The advertiser plaintiffs initiated suit on May 27, 2020. With respect to all of the conduct giving rise to Plaintiffs' claims and for each category of conduct described, Google's conduct continued into and throughout the limitations period. Each time Google manipulated the auction for display advertising on the sale of impressions to advertisers, it committed an overt act continuing the illegal conduct.

322. Each of the categories of injurious conduct continued at least through 2019, including Dynamic Allocation, Enhanced Dynamic Allocation, Dynamic Revenue Sharing, Projects Bernanke, Poirot and Elmo, Unified Pricing Rules, redaction of auction data, limitations on publisher line items and Reserve Price Optimization. Google carried out overt acts within the limitations period in furtherance of each of these categories of its scheme to monopolize the relevant markets.

323. Moreover, even if some conduct occurred prior to the limitations period, Google's conduct should not be assessed piecemeal. The injury caused by Google's acts outside the period were continued and exacerbated by Google's acts within the limitations period.

B. The Statutes of Limitations Did Not Begin to Run Because Plaintiffs Did Not and Could Not Discover Their Claims.

324. To the extent certain of Google's anticompetitive acts occurred before the applicable limitation periods, not until the announcement of governmental investigations into Google's monopolization of the relevant markets could Plaintiffs have discovered their antitrust injuries and causes of action set forth in this Complaint. At the time it occurred, no reasonable class member had any basis to discern the anticompetitive nature of Google's conduct described in this Complaint that occurred before the applicable limitations periods.

325. Plaintiffs and class members had no actual or constructive knowledge of Google's anticompetitive conduct or of facts sufficient to place them on inquiry notice of the claims asserted herein, during the class period and continuing thereafter. Plaintiffs and class members suffered antitrust injury in the form of economic losses as a result of Google's anticompetitive conduct and wrongful exercise of monopoly and market power in the relevant markets. But, other than dealing directly with Google when using its digital advertising services, Plaintiffs had no direct contact with Google and no means from which they could have discovered these injuries and the other bases for their causes of action set forth in this Complaint. Until 2019 at the earliest, there was no information in the public domain sufficient to put Plaintiffs on notice that Google had wrongfully acquired monopolies in the relevant markets or was using its monopoly and market power to charge advertisers supra-competitive prices for display advertising. It was reasonable for Plaintiffs and class members not to suspect that Google was engaging in any unlawful and injurious anticompetitive behavior.

326. Thus, under the discovery rule, because Plaintiffs could not have discovered that they suffered antitrust injury as a result of Google's conduct until the announcement of governmental investigations into Google's monopolization of the markets, Plaintiffs' claims, arising out of conduct that began before the limitations period, did not accrue until 2019 at the earliest and are timely.

C. Google's Fraudulent Concealment Tolled the Statute of Limitations

327. Additionally or alternatively, application of the doctrine of fraudulent concealment tolled the statutes of limitations on Plaintiffs' claims because they did not have actual or constructive knowledge of Google's wrongful use of its of monopoly and market power in the relevant markets, or of facts sufficient to place them on inquiry notice of their injuries or the other bases for their causes of action, during the class period and continuing thereafter. No information in the public domain or otherwise available to Plaintiffs during the class period suggested that Google was using its monopoly and market power to charge advertisers supra-competitive prices for display advertising.

328. Google took steps to conceal its illicit and harmful conduct, both by failing to disclose its wrongful acquisition and maintenance of monopoly and market power through exclusionary acts in the relevant markets, and by affirmatively denying that it was engaged in such conduct.

329. Google made false statements and misrepresentations to advertisers and publishers about the nature of much of the conduct described above, including Dynamic Allocation, Enhanced Dynamic Allocation, Dynamic Revenue Sharing, Reserve Price Optimization, and Unified Pricing Rules. Google kept secret and/or failed to reveal the true

nature and impact of its auction-rigging programs, including Projects Bernanke, Poirot, and Elmo.

330. Google misled advertisers (and publishers) into believing its ad exchange AdX was running a true second-price auction while hiding from them that it was using various tools to manipulate the auctions. Google hid Dynamic Revenue Sharing from advertisers and publishers, misleading them into believing AdX was running as a second-price auction when, in fact, Google was manipulating the price floors. Google internally acknowledged that Dynamic Revenue Sharing "makes the auction untruthful" but did not reveal this publicly. Similarly, as a further example, Google falsely stated that its AdX Exchange was running a second-price auction when Project Bernanke worked to secretly drop the second-highest bid from the auction and allow Google to pay the publisher the third-highest bid and privately retain the difference.

331. In addition to misrepresenting and concealing the true nature of its auction-rigging programs, Google has (repeatedly) publicly denied allegations by U.S. and foreign regulators that it has abused its power in digital advertising markets. These affirmative statements, and Google's nondisclosure that it had acted to forestall competition, served to fraudulently conceal Google's unlawful monopoly in the relevant markets.

332. When the French Competition Authority fined Google $167 million in late 2019, Google publicly defended its advertising policies in a statement issued on December 20, 2019, as purportedly needed to "protect [people] from exploitative and abusive ads." In fact, as discussed above, Google adopted those policies to protect its monopoly power by heading off competition. Similarly, in response to news reports in 2019 that federal and state officials had opened antitrust investigations into Google's advertising business, a Google vice-president for product management, Sissie Hsiao, released a public statement on September 11, 2019, asserting that

"[c]ompetition is flourishing, and publishers and marketers have enormous choice" when that was false. By October 2021, Google had paid France $270 million in fines for abusing its dominance in the ad-tech stack—French officials explained that Google's "very serious practices penalized competition" in online advertising and Google had been "rightly punished."

333. Google continues to make false statements as to the competitive nature of its advertising products. For example, in response to a new probe announced by European Union competition officials on June 22, 2021 regarding whether Google's services show an "apparent favouring of Google's ad exchange 'AdX' by DV360 and/or Google Ads and the potential favouring of DV360 and/or Google Ads by AdX," Google said in a statement that thousands of companies in Europe use its advertising products each day and that "[t]hey choose them because they're competitive and effective." Those statements are false. Google's advertising products are not competitive but, rather, priced at artificially high monopoly levels.

334. Additionally, Google's internal messaging, as noted by DOJ, demonstrates its executives' awareness that Google has used its monopoly power to restrain competition and highlights their efforts to conceal these antitrust violations: "Google employees were instructed to avoid using terms such as 'bundle,' 'tie,' 'crush,' 'kill,' 'hurt,' or 'block' competition, and to avoid observing that Google has 'market power' in any market."

335. Due to Google's nondisclosure and fraudulent concealment of its exclusionary acts in the relevant markets, Plaintiffs could not have detected Google's anticompetitive conduct until various governmental investigations into Google's monopolization of the relevant markets in the display advertising were made public in 2019.

336. Considered together, Google's failure to disclose it had gained a monopoly through exclusionary acts in the relevant markets, in addition to Google's affirmative denials that

it engaged in such conduct, tolls Plaintiffs' claims based on fraudulent concealment given that there was no public information available to Plaintiffs during the class period that reasonably would have put Plaintiffs on notice of Google's anticompetitive conduct.

337. In addition to its affirmative fraud and nondisclosure, Google's anticompetitive conduct also was inherently self-concealing because revealing the true facts concerning Google's monopolistic behavior would have prompted governmental enforcement activity and/or class action litigation. Digital advertising is subject to antitrust regulation, so it was reasonable for Plaintiffs and class members not to suspect that digital advertising services were being sold in a noncompetitive market. A reasonable person under the circumstances would not have had occasion to suspect Google was brokering display advertising at supra-competitive prices at any time during the class period.

338. Because Google's antitrust violations were self-concealing and affirmatively concealed by Google, Plaintiffs and class members had no knowledge of Google's antitrust violations or of facts or information that would have caused a reasonably diligent person to suspect Google of having wrongfully acquired and maintained monopoly and market power during the class period. Therefore, by operation of Google's fraudulent concealment, the statutes of limitations applicable to Plaintiffs' and class members' claims were tolled throughout the class period.

X. CLASS ACTION ALLEGATIONS

339. Plaintiffs bring this action on behalf of themselves and as representatives of the following class:

> All persons and entities in the United States that, from January 1, 2016 to the present, placed a display ad on a website or mobile application operated by another entity via a transaction in which the impression was sold, brokered, exchanged or auctioned by Google.

Excluded from the class are Defendants, their employees, co-conspirators, officers, directors, legal representatives, heirs, successors and wholly or partly owned subsidiaries or affiliated companies; class counsel and their employees; and the judicial officers and their immediate family members and court staff assigned to this case.

340. The class meets the requirements of Federal Rules of Civil Procedure 23(a), (b)(1), (b)(2), and (b)(3).

341. The members of the class are so numerous that joinder is impracticable. The class includes at least hundreds of thousands of members that are widely dispersed throughout the country.

342. Plaintiffs' claims are typical of the claims of all class members. Plaintiffs' claims arise out of a common course of conduct that gives rise to the claims of all other class members. Plaintiffs and all class members were and will continue to be damaged in the same manner by the same wrongful conduct, namely Google's unfair business practices, agreements in restraint of trade, and illegal monopolization of display advertising services markets.

343. Plaintiffs will fairly and adequately protect and represent the interests of the class. Plaintiffs' interests are coincident with, and not antagonistic to, those of the class.

344. Plaintiffs are represented by counsel who are experienced and competent in the prosecution of class action litigation and have particular expertise with antitrust litigation.

345. Numerous questions of law or fact common to the class arise from Google's course of conduct to exclude competition in the relevant markets, including:

a. Whether Google holds monopoly or market power in the relevant markets;

b. Whether Google unlawfully acquired and maintained monopoly or market power in the relevant markets;

c. Whether the NBA between Google and Meta unreasonably restrains trade in the Final Clearinghouse Auction run by Google or in any relevant market;

d. Whether Google's Unified Pricing Rules and capping of publisher line items unreasonably restrain trade in any relevant market through combinations with publishers;

e. Whether Google engaged in unfair or deceptive acts or practices in the conduct of trade;

f. The form and content of injunctive relief to restore competition; and

g. The amount of damages owed the class as a result of Google's illegal activity.

346. Questions of law and fact common to members of the class will predominate over any questions that may affect only individual class members because Google acted on grounds generally applicable to the class as a whole. For the same reason, class certification for purposes of adjudicating Plaintiffs' claims for injunctive and corresponding declaratory relief is appropriate.

347. A class action is superior to other alternatives for the fair and efficient adjudication of the Advertisers' causes of action. Prosecution of this lawsuit as a class action will eliminate the possibility of repetitive litigation. There will be no material difficulty in the management of this action as a class action.

348. The prosecution of separate actions by individual class members would create the risk of inconsistent or varying adjudications, establishing incompatible standards of conduct for Google.

349. Plaintiffs reserve the right to amend the class definition and to seek class certification with respect to common issues, including issues related to market definition, monopoly or market power, or Google's duties or conduct.

XI. CAUSES OF ACTION

FIRST CAUSE OF ACTION
Monopolization
15 U.S.C. § 2

350. Plaintiffs incorporate the allegations set forth above as if fully set forth here.

351. Plaintiffs assert this cause of action against Google.

352. The U.S. markets for ad exchanges and for ad-buying tools for small advertisers are relevant antitrust markets, and Google holds monopoly power in each of these markets.

353. Google wrongfully acquired and unlawfully maintained monopoly power in these markets through the conduct alleged herein, including by (a) impeding competition between exchanges and advantaging its exchange through processes codenamed Dynamic Allocation and Enhanced Dynamic Allocation; (b) manipulating exchange auctions through secret programs codenamed Dynamic Revenue Sharing and Project Bernanke (and its variants); (c) engaging in a scheme to "kill" header bidding by diverting ad spend away from rival exchanges that permitted header bidding, including through the processes codenamed Projects Poirot and Elmo; and (d) imposing floor-price parity through Unified Pricing Rules.

354. Google's actions were carried out willfully and with the intent to acquire and maintain monopoly power in the markets for ad exchanges and for ad-buying tools for small advertisers through anticompetitive conduct and not through a superior product, business acumen, or a historic accident. There is no legitimate procompetitive justification for Google's anticompetitive conduct, and even if there were, less restrictive alternatives to achieve it would exist.

355. As a direct and proximate cause of Google's conduct, Plaintiffs and members of the class have suffered antitrust injury in the form of economic losses. Those losses constitute antitrust injury, as they are an injury of the type the antitrust laws were intended to prevent and that flows from what makes Google's monopolistic acts unlawful. But for Google's exclusionary conduct, competition would have prevailed in the relevant markets and Plaintiffs and class members would not have sustained these losses. Google's conduct also deprived Plaintiffs and class members of improved quality and innovation in the relevant markets.

356. Plaintiffs and class members seek equitable relief as appropriate to halt Google's monopoly conduct and restore competition in the relevant markets. The primary purpose and effect of such injunctive relief will be to benefit the public from the lower prices and greater innovation that will prevail in competitive digital advertising markets in the absence of Google's monopolies.

357. Plaintiffs and class members are entitled to damages, including treble damages, sustained as a result of Google's monopolistic acts and practices under 15 U.S.C. § 15.

SECOND CAUSE OF ACTION
Attempted Monopolization
15 U.S.C. § 2

358. Plaintiffs incorporate the allegations set forth above as if fully set forth here.

359. Plaintiffs assert this cause of action against Google.

360. The U.S. markets for ad exchanges, ad-buying tools for small advertisers, and ad-buying tools for large advertisers are relevant antitrust markets. Google has monopoly power, or there is dangerous probability that Google will acquire monopoly power, in these markets.

361. Google willfully, knowingly, and with specific intent to do so, attempted to monopolize these markets through the conduct alleged herein, including by (a) impeding competition between exchanges and advantaging its exchange through processes codenamed

Dynamic Allocation and Enhanced Dynamic Allocation; (b) manipulating exchange auctions through secret programs codenamed Dynamic Revenue Sharing and Project Bernanke (and its variants); (c) engaging in a scheme to "kill" header bidding by diverting ad spend away from rival exchanges that permitted header bidding, including through the processes codenamed Projects Poirot and Elmo; and (d) imposing floor-price parity through Unified Pricing Rules.

362. As a direct and proximate cause of Google's conduct, Plaintiffs and members of the class have suffered antitrust injury in the form of economic losses. Those losses constitute antitrust injury, as they are an injury of the type the antitrust laws were intended to prevent and that flows from what makes Google's attempted monopolization unlawful. But for Google's exclusionary conduct, competition would have prevailed in the relevant markets and Plaintiffs and class members would not have sustained these losses. Google's conduct also deprived Plaintiffs and class members of improved quality and innovation in the relevant markets.

363. There is no legitimate procompetitive justification for Google's anticompetitive conduct, and even if there were, less restrictive alternatives to achieve it would exist.

364. Plaintiffs and class members are entitled to damages, including treble damages, sustained as a result of Google's attempted monopolization under 15 U.S.C. § 15.

THIRD CAUSE OF ACTION
Contract or Combination in Restraint of Trade
15 U.S.C. § 1

365. Plaintiffs incorporate the allegations set forth above as if fully set forth here.

366. Plaintiffs assert this cause of action against Google and Meta.

367. The relevant market for the purposes of this cause of action is the market for web and in-app display space sold at auction in Final Clearinghouse Auctions run by Google.

368. The NBA between Google and Meta constitutes a contract, combination, or conspiracy that unreasonably restrains trade or commerce in auction market for web and in-app

display space by providing Meta with superior information regarding publishers' and developers' bid requests that Google withholds from other bidders in its auctions.

369. The NBA places advertisers who bid in Google's Final Clearinghouse Auctions, but who do not bid through Meta's MAN intermediary, at a competitive disadvantage and renders them worse off than they would be in the absence of the NBA.

370. Defendants' unreasonable agreement restraining trade has caused injury in fact and antitrust injury to Plaintiffs and class members by forcing them to place supra-competitive bids to win auctions against Meta's advertising customers for open display web and in-app inventory. Defendants' conduct restrained trade in the market in which Plaintiffs and class members made their purchases. In paying anticompetitive overcharges as a result of Defendants' conduct, Plaintiffs and class members suffered an injury of a type which the antitrust laws were designed to redress.

371. Defendants' agreement constitutes a violation of Section 1 of the Sherman Act, 15 U.S.C. § 1, and the anticompetitive consequences of the agreement far exceed any putative procompetitive effect.

372. Plaintiffs and class members are entitled to treble damages under 15 U.S.C. § 15.

FOURTH CAUSE OF ACTION
Unlawful Trust
Cal. Bus. & Prof. Code § 16720 *et seq.*

373. Plaintiffs incorporate the allegations set forth above as if fully set forth here.

374. Plaintiffs assert this cause of action against Google and Meta.

375. Google and Meta through their NBA entered into a continuing combination of capital, skill or acts to unreasonably restrict trade or commerce in violation of the Cartwright Act, California Business and Professions Code § 16720 *et seq.*, by preventing competition in the market for web and in-app display space sold at auction in Final Clearinghouse Auctions run by

Google. Among other violations, Google and Meta agreed to pool, combine or directly or indirectly unite their interests connected with the transacting of bids on such auctions, and in doing so artificially affected the pricing of the bids. The anticompetitive consequences of the NBA far exceed any putative procompetitive effect.

376. The NBA places advertisers who bid in Google's Final Clearinghouse Auctions, but who do not bid through Meta's MAN intermediary, at a competitive disadvantage and renders them worse off than they would be in the absence of the NBA. Defendants' unlawful agreement caused injury in fact and antitrust injury to Plaintiffs and class members by forcing them to place supra-competitive bids to win auctions against Meta's advertising customers for open display web and in-app inventory. Defendants' conduct restrained trade in the market in which Plaintiffs and class members made their purchases. In paying anticompetitive overcharges as a result of Defendants' conduct, Plaintiffs and class members suffered an injury of a type which the antitrust laws were designed to redress.

377. Plaintiffs and class members are entitled to treble damages under California Business and Professions Code § 16750.

FIFTH CAUSE OF ACTION
Contracts or Combinations in Restraint of Trade
15 U.S.C. § 1

378. Plaintiffs incorporate the allegations set forth above as if fully set forth here.

379. Plaintiffs assert this cause of action against Google.

380. The relevant markets for purposes of this cause of action are the U.S. markets for ad exchanges, ad-buying tools for small advertisers, and ad-buying tools for large advertisers.

381. Through a series of agreements imposed on publishers, Google has unreasonably restrained trade and foreclosed competition in this market, in violation of Section 1 of the

Sherman Act, 15 U.S.C. § 1. The anticompetitive consequences of these restraints far exceed any putative procompetitive effect.

382. Historically, publishers set different price floors on different exchanges, fostering competition between Google and non-Google exchanges and ad tech tools. Google's "Unified Pricing Rules"—introduced with the 2019 revision of Google Ad Manager's pricing rules—ended that competition. Discounts and other deals that could pit Google against its rivals were foreclosed by these restrictions, resulting in artificially higher prices borne by advertisers.

383. Under Unified Pricing, Google precludes publishers from setting different price floors for different exchanges and ad-buying tools. Google imposes these price-fixing terms on publishers as a condition on their continued use of Google's monopoly ad server and by exercising its discretion under its agreements with publishers. Participating publishers agreed and assented to the change by continuing to use DFP. Google's written agreements for DFP customers also provide, explicitly or implicitly, that the publisher agrees to Google's rules and restrictions applicable to DFP.

384. Google prohibits publishers from setting different threshold bids on competing exchanges or giving different advertisers different prices than publishers give Google and buyers on its properties. Among other effects, these restrictions have prevented publishers from routing their ad space to another exchange at a price floor lower than the floor given to Google's exchange, or from giving one bidder a lower price floor than another bidder.

385. Google's unlawful agreements also impose a 5 to 10 percent fee for transactions that clear on other exchanges. Google thereby both profits on trades outside its system and handicaps the competition that clears those trades. Thus, the tax imposed by Unified Pricing restrains competition by inducing transactions on Google's exchange.

386. Each publisher that accepted Unified Pricing Rules knew that other publishers were also accepting these rules, as the change was imposed across Google's electronic systems. Publishers also knew that the Unified Pricing Rules were suboptimal for their bottom line and likely to increase Google's share of the relevant markets.

387. Publishers were coerced to accept and acquiesced to Google's Unified Pricing Rules, which have reduced competition among exchanges. These price-fixing agreements imposed upon publishers, compounded by the fees that Google imposes for transactions that occur off its exchange, impede the ability of competing exchanges to deliver impressions at lower prices. Advertisers were harmed because the higher volume of commerce on Google's exchange that resulted from these restraints reduced their choices in the ad-buying tool and exchange markets and caused them to pay higher prices to place ads through Google.

388. Google also imposed restrictive agreements on publishers that capped the number of line items they could use on header bidding. Publishers were coerced to accept and acquiesced to these restrictions, which Google presented as a condition of continuing to use its monopoly ad server. Each publisher that accepted Google's line-item restrictions knew that other publishers were also accepting these rules, and publishers also knew that the restrictions would damage their bottom line and likely increase Google's share of the exchange market.

389. The restriction on line items constrained publishers' participation in header bidding, and as a result, a substantial percentage of auction transactions for ad impressions shifted to Google's Exchange Bidding (later re-named Open Bidding). Fewer line items cause publishers' bids from header bidding exchanges to be rounded down more often. As a result, the bids from header-bidding exchanges are less competitive compared to the bids from Google's—which also do not trigger an additional fee. Advertisers were harmed because the higher volume

of commerce on Google's exchange that resulted from Google's line-item restraint reduced their choices in the ad-buying tool and exchange markets and caused them to pay higher prices to place ads through Google.

390. The combinations and agreements between Google and its publisher customers violate Section 1 of the Sherman Act, and caused Plaintiffs and class members to pay anticompetitive overcharges, an injury of a type which the antitrust laws were designed to redress. Plaintiffs and class members thus have been injured in their business or property and are entitled to treble damages under 15 U.S.C. § 15.

SIXTH CAUSE OF ACTION
Unlawful Trusts
Cal. Bus. & Prof. Code § 16720 *et seq.*

391. Plaintiffs incorporate the allegations set forth above as if fully set forth here.

392. Plaintiffs assert this cause of action against Google.

393. Google entered into continuing combinations of capital, skill or acts with publishers to unreasonably restrict trade or commerce in the U.S. markets for ad exchanges, ad-buying tools for small advertisers, and ad-buying tools for large advertisers. These trusts violate the Cartwright Act, California Business and Professions Code § 16720 *et seq*., for the reasons set forth in the Fifth Cause of Action above, and their anticompetitive consequences far exceed any putative procompetitive effect.

394. The aforementioned combinations and agreements between Google and its publisher customers caused Plaintiffs and class members to pay anticompetitive overcharges, an injury of a type which the antitrust laws were designed to redress. Plaintiffs and class members thus have been injured in their business or property and are entitled to treble damages under California Business and Professions Code § 16750.

SEVENTH CAUSE OF ACTION
Unfair or Deceptive Acts or Practices
Cal. Bus. & Prof. Code § 17200 *et seq.*

395. Plaintiffs incorporate the allegations set forth above as if fully set forth here.

396. Plaintiffs assert this cause of action against Google.

397. California's Unfair Competition Law ("UCL"), Cal. Bus. & Prof. Code § 17200, et seq., proscribes acts of unfair competition, including "any unlawful, unfair or fraudulent business act or practice and unfair, deceptive, untrue or misleading advertising."

398. Google has engaged in unlawful, unfair or fraudulent business acts or practices and unfair, deceptive, untrue or misleading advertising, causing direct and substantial harm to Plaintiffs and class members in the form of increased advertising costs and reduced efficacy of ad spending. Google's conduct violative of the UCL occurred in the U.S. markets for ad exchanges, ad-buying tools for small advertisers, and ad-buying tools for large advertisers.

399. Google has engaged in unlawful business practices, in violation of the UCL, because its conduct alleged herein violates the Sherman Act, 15 U.S.C. §§ 1 and 2.

400. Google's practices are unfair in violation of the UCL because, among other things, they offend public policy; are immoral, unethical, oppressive, outrageous, unscrupulous, and substantially injurious; and caused substantial harm, including from Google's inflated prices that advertisers paid, that substantially outweighs any possible utility from the practices.

401. Plaintiffs and class members reasonably expected Google's auctions to be fair and reasonable. Google violated the UCL by falsely representing to advertisers that it was conducting fair and transparent ad auctions. At no point did Google disclose the material fact that it was deploying its monopoly and market power across the ad stack, as set forth above, to

advantage itself in the display auction market and disadvantage display advertisers who sought to use non-Google products and services.

402. Google's unfair and deceptive business practices actually and proximately caused Plaintiffs and class members to lose money or property. Google secretly implemented deceptive practices that caused direct and substantial harm to advertisers who were forced to pay higher ad rates, coerced into using Google's ad-buying tools, and deprived of the benefits of competition in the markets for ad-buying tools and ad exchanges.

403. Among other deceptive and unlawful acts that injured advertisers, Google used (a) Reserve Price Optimization to deceptively increase the amounts advertisers paid on AdX; (b) Dynamic Revenue Sharing to secretly increase the publisher fees advertisers were required to pay in AdX when an advertiser bit significantly above the publisher's floor; (c) Project Bernanke, including the Bell and Global Bernanke variants, to manipulate ad auctions in order to give an unfair advantage to Google Ads and disadvantage advertisers using other ad-buying tools; (d) Projects Poirot and Elmo to disadvantage advertisers using DV360 to bid on non-Google exchanges that used Header Bidding; and (e) Unified Pricing Rules, which prevented publishers from setting different floors for advertisers using non-Google ad-buying tools, thereby foreclosing competition in the markets for ad-buying tools and ad exchanges, and in turn, causing advertisers to pay higher ad rates due to the elimination of competition.

404. Plaintiffs and class members lack an adequate remedy at law to redress certain conduct of Google that violates the unfair prong of the UCL. Through the practices described herein, Google suppressed competition in its incipiency, violated well-established antitrust policies, and threatened to destroy and actually destroyed competition in the relevant markets.

405. Accordingly, on behalf of the class, Plaintiffs seek injunctive relief, restitution, and reasonable attorneys' fees, as well as any other relief the Court may deem just or proper. The primary purpose and effect of such injunctive relief will be to benefit the public from the lower prices and greater innovation that will prevail in competitive digital advertising markets in the absence of Google's monopoly.

XII. PRAYER FOR RELIEF

406. WHEREFORE, Plaintiffs, on behalf of themselves and the class defined herein, respectfully request that this Court:

A. Determine that this action may be maintained as a class action pursuant to Fed. R. Civ. P. 23(a), (b)(2), and (b)(3), direct that reasonable notice of this action be given to the class, appoint Plaintiffs as named representatives of the class, and appoint the undersigned Plaintiffs' counsel as class counsel;

B. Enter judgment against Google and Meta and in favor of Plaintiffs and the class;

C. Enter injunctive relief to restore competition in the relevant markets;

D. Award damages, including treble damages, and/or restitution to the class in an amount to be determined at trial, plus interest in accordance with law;

E. Award Plaintiffs and the class their costs of suit, including reasonable attorneys' fees, as provided by law; and

F. Award such further and additional relief as is necessary to redress the harm caused by the Defendants' unlawful conduct and which the Court may deem just and proper under the circumstances.

XIII. DEMAND FOR JURY TRIAL

407. Pursuant to Federal Rule of Civil Procedure 38, Plaintiffs demand a trial by jury on all matters so triable.

Dated: October 5, 2022

Respectfully submitted,

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